15c

OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

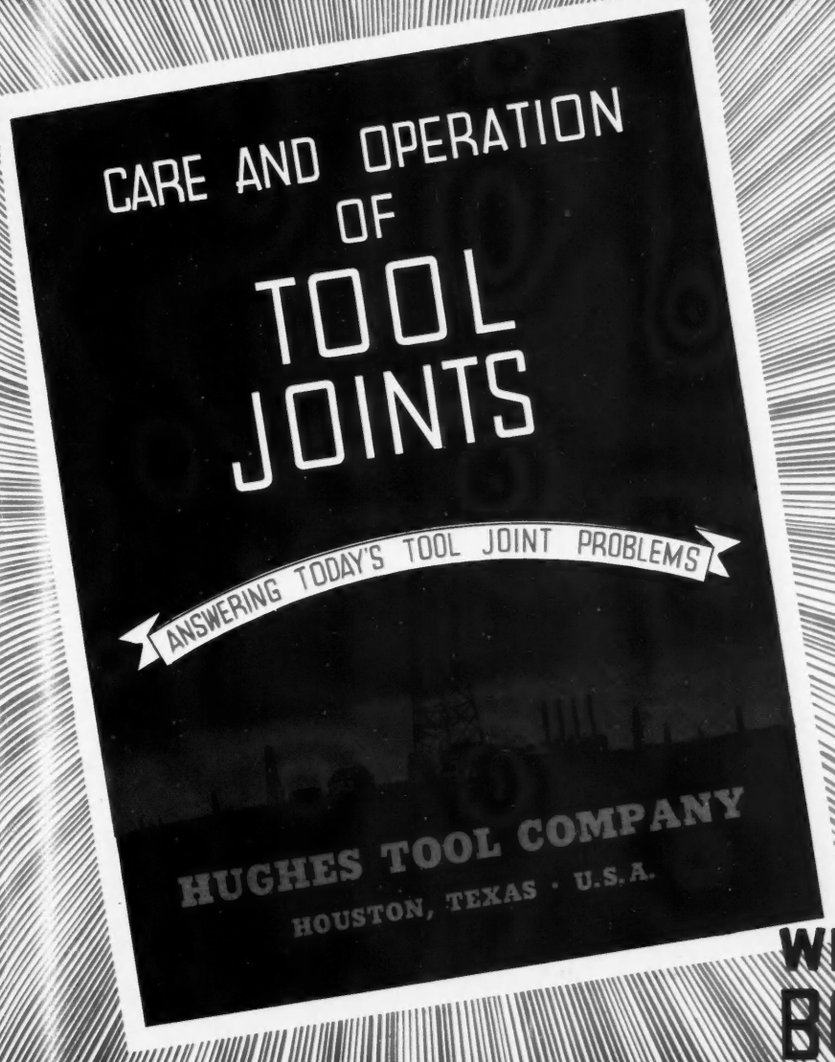
THE WEEK'S NEWS INTERPRETED

WORTH ITS WEIGHT IN DIAMONDS

to users of

TOOL JOINTS

Winchell Library of Geology



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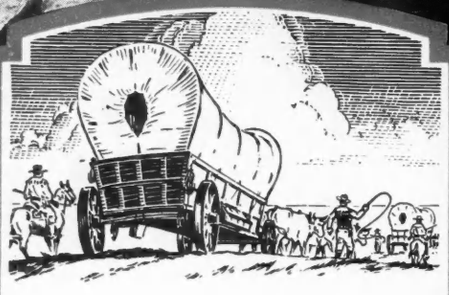
UNION Wire Lines "TAME" Kansas Wildcats



When Kansas Helped Tame the Wild West

the period following 1825, Kansas pioneers did their part towards making the West safe for settlement. They found the western prairies overrun by hostile Indians and great herds of buffaloes. In their conquest of the Kansas plains, both men and women showed unfaltering courage.

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Kansas has a great future in oil. Already the nation's fourth largest producer, she has more untested structures than any other state. Kansas is rapidly developing new fields, and wildcatting plays an important part on her drilling program.

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All through the oil country UNION Lines are setting high standards of dependable performance. They are made by OIL men who make it their business to KNOW oil field requirements.

The photograph was taken at a wildcat well know as Deines No. 1, drilled by J. J. Hall in Trego County, Kansas. Appearing in the picture, left to right, are: Ray Custer, driller; Verl Reff, tool dresser; B. W. Shindhelm, production sup't.; Jess Hunt, Jarecki Mfg. Co.; H. M. Humphrey, Union Wire Rope Corp.

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THE OIL WEEKLY

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The Oil Man's Calendar

JAN. 16–24	**First International Consumers Petroleum Exposition, Detroit.**
FEB. 15–19	**American Institute of Mining and Metallurgical Engineers, New York**
MAR. 12	**Interstate Oil Compact Commission, Oklahoma City, Oklahoma.**
17–19	**American Association of Petroleum Geologists, Los Angeles.**
APR. 8–10	**Petroleum Industry Electrical Association, Shreveport, Louisiana. American Petroleum Institute, Division of Production, Pacific Coast District, Los Angeles.**
15–16	**National Petroleum Association, Cleveland, Ohio.**
MAY 6–7	**American Petroleum Institute, Division of Production, Eastern District, Columbus, Ohio.**
10–16	**American Gas Association, Natural Gas Department, Kansas City, Missouri.**
JUNE 1–3	**American Petroleum Institute, Mid-Year Meeting, Colorado Springs, Colorado.**
11	**Interstate Oil Compact Commission, Santa Fe, New Mexico.**
17–19	**Pennsylvania Grade Crude Oil Association, Sailing from Buffalo, New York.**

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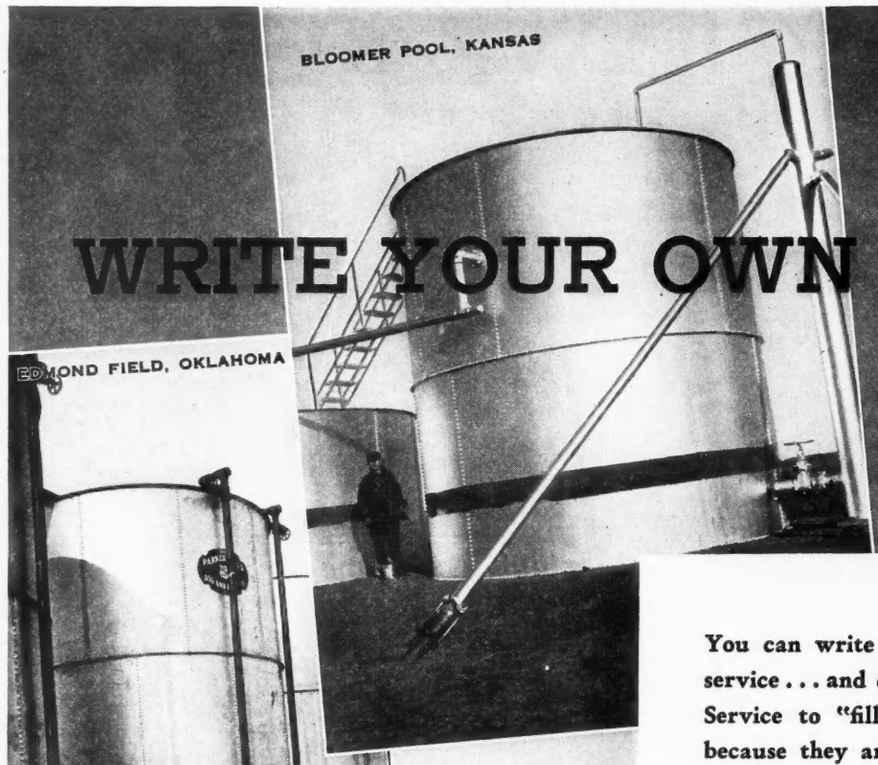
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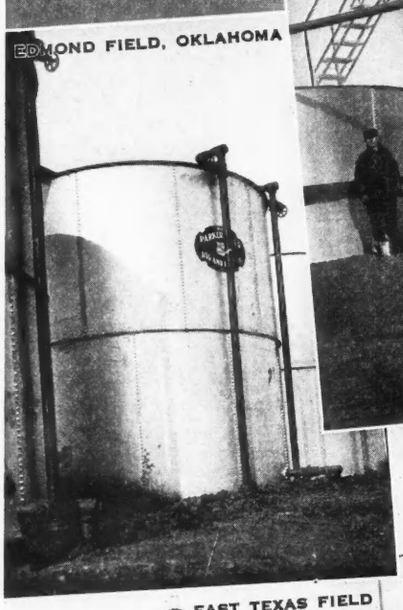
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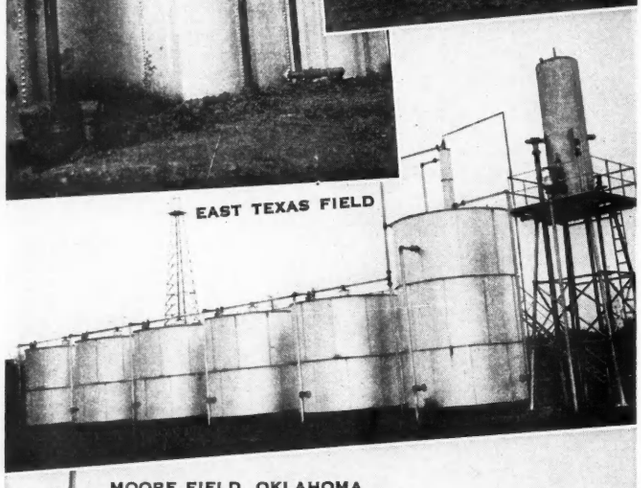
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THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor

This Week:

SUSTAINED heavy consumption permitted the petroleum industry to continue to cling to a strong statistical position during December, although more liberal state allowables and some relaxation in control allowed production to average 3,109,585 barrels daily. Of interest was the interruption of large crude stock withdrawals. Only about 500,000 barrels was taken from storage during December, compared with 4,000,000 to 7,000,000 barrels monthly prior to November. Gasoline stocks increased approximately 4,500,000 barrels. Meanwhile, the markets remained favorable. **Page 10**

THE crude oil price situation remained puzzling last week, with major purchasers failing to announce any advance. Two smaller buyers that were to pay on the higher basis set January 4 by Continental Oil Company last week were awaiting some action from larger companies before doing so. Meanwhile, rumors continued to fly thick and fast, but there wasn't any definite action. **Page 8**

THE oil industry last week lost in its attempt to have the first set of indictments charging it with violating the anti-trust laws quashed. This occurs when the federal judge dismissed abatement pleas and ordered 17 individual defendants and all corporate defendants to appear personally on February 1. **Page 9.**

PRESIDENT Roosevelt in his annual budget message to Congress urged the retention of all taxes on oil and its products. He pointed out the importance of these levies as money obtainers. It is expected that $249,000,000 will be obtained during the coming year from this source. **Page 9.**

THE deepest commercial flowing well in the world was completed last week in the Lafitte field of southern Louisiana. The well, which belongs to The Texas Company, flowed 1636 barrels through 3/8-inch choke and a back pressure of 1500 pounds the first 24 hours. The depth of the well is 10,244 feet, with several sands below 10,000 feet yielding oil. **Page 63**

AN interesting flow string has been run in a well that has given much trouble because of its corrosive fluid. The string is corrosive resisting from top to bottom in that no metal is exposed to the fluid. This has been accomplished with an assembly consisting of cement-lined casing, bronze-lead seal, bronze bushing, liner and screen. In reconditioning the well this assembly was run inside of the old flow string. **Page 30**

TEXAS' statute providing for intangible assets taxes on pipe lines operating in the state has been held valid by a civil appeals court. Several interesting statements were given in the extended opinion handed down by the court. **Page 8**

FOUR main factors are recognized as being of major importance in governing the rate of production, whether it be the maximum rate or a low rate governed by proration. These factors are: Pressure in the reservoir; permeability of the sand; condition of the sand face; and diameter and length of flow string. Once placed on production, little can be done to change these conditions. Therefore, the last two factors, which are subject to mechanical changes, should be studied prior to completion so as to get the best relationships. **Page 21.**

WHILE proper care and maintenance of crude storage tanks will definitely prolong their service life, proper selection and installation will result in savings not possible with care alone. Tanks are available in various materials and each type is best suited for some service requirement. After selecting the tank, the construction of tank sites, grades, etc., is the next most important factor in efficient service. **Page 33.**

A DUAL-PURPOSE gas injection manifold of interest is being used on a Kansas repressuring project. The manifold permits accurate control of the volumes injected into the sands and provides quick measurements. It is simple in design and operation, yet satisfies all requirements of operation and fabrication. **Page 38.**

Next Week:

DURING winter months the problems of operating gas pipe lines are multiplied. Not only does consumer demand reach a peak, but natural gasoline forms in the lines due to low temperatures, and the formation of gas hydrates within the transportation system becomes a factor. Certain short cuts to gas pipe line maintenance during winter months will be discussed by Frank B. Taylor.

REPRESSURING has been applied with satisfactory results to a small North Texas field discovered in 1923. The injection of gas into the producing sand over a period of five years is calculated to have increased the ultimate recovery considerably. The production estimates on this project will be presented in an interesting article next week that also will discuss the practices employed by the operator in injecting the gas volumes.

OTHER technical features will be presented, along with coverage of important news and field developments.

Big Buyers Silent

OTHER PURCHASERS FAIL TO MEET CONTINENTAL OIL PRICES

TULSA.

THERE was only one definite action last week in the crude price situation, and it was that only Continental Oil Company and Barnsdall Oil Company were paying higher prices for crude in the Mid-Continent. Barnsdall Oil Company, Globe Oil & Refining Company and Derby Petroleum Company had announced that they would follow Continental Oil Company's increase, but last week they were not doing so, although the raise was to be effective January 4. The three concerns were awaiting action on the part of some major purchaser before paying the higher posting, and meanwhile none of the larger buyers had made a move, and instead were maintaining an icy silence regarding the situation.

Two Different Beliefs

Authoritative circles were of two minds regarding the situation. Some felt major purchasers soon would at least meet a part of the increase, while others believed there would be continued resistance. It has been the experience in the past that no changes in crude prices can be maintained unless the large buyers, notably Carter Oil Company, Stanolind Oil & Gas Company, Gulf Refining Corporation, Sinclair Refining Company, Humble Oil & Refining Company, Shell Petroleum Corporation and The Texas Company posted or supported them.

The basic price of crude oil posted by Continental Oil Company was $1.11 a barrel for oil below 29 gravity, with the price ranging upward 2 cents for each degree of gravity to $1.35 for 40 and above. This represents a 17-cent per barrel raise.

Rumors continued to fly thick and fast. For example, in New York City it was heard that large buyers were going to post either a 12 or 15-cent boost because of a shortage of crude coming from Lake Maracaibo, where a strike is in progress. Likewise, it was stated that the maritime strike on the Pacific and Gulf Coast ports was having a strong influence. Early in the week it was a general belief that several majors were awaiting the establishment of the Oklahoma crude production allowable for January, and that if it was not increased by the Corporation Commission prices would advance. However, last Tuesday the commission made known that it would stay with the Bureau of Mines' recommendations for the state. Despite this development, there wasn't any announcement of a crude price increase from major concerns.

On one hand, well connections east of the Rockies are extremely tight, which lends hope to the independent producers. On the other hand, executives of large buying and selling firms realize that if crude oil is advanced, the retail price of gasoline also must be raised, which would be subject to criticism from the buying public.

There seemed to be only one party that was to benefit by the situation, and that was Dan Moran, president of Continental Oil Company. If the advance becomes general, he will be "the man who brought it about." Should it become necessary for him to reduce his prices to the level other purchasers are paying, he will be looked upon as "the man who did his best to get us better prices." In either event, this will win him much favor with independent producers.

FOLLOW BUREAU

Oklahoma Jan. output kept to 573,100 barrels

OKLAHOMA CITY.

AN order issued by the Oklahoma Corporation Commission on January 5 stated that January allowable for the state would be kept at 573,100 barrels of oil daily, the figure recommended by the United States Bureau of Mines. Operators, in meeting last week with members of the commission, were unanimous in their opinion that the state should stay within the allowable recommended by the bureau, but felt that increased production could be had without waste.

Court Upholds Tax

TEXAS PIPE LINES SUBJECT ON INTANGIBLE ASSET BASIS

AUSTIN.

THE Third Court of Civil Appeals last week handed down an opinion holding valid the Texas statute providing for intangible assets taxes on Texas pipe lines.

In an extended opinion, which generally discussed tax law in Texas, the court made several interesting statements which are outlined below:

Interesting Statements

That the act was not void as not providing any lawful method of equalizing the value of intangible property of the corporations included in the act with similar property of other taxpayers not included in the act.

That the method of equalization adopted by the State Tax Board was not illegal as being unauthorized by the act, and that the method of equalization adopted did not actually result in an increased and discriminatory tax burden on the corporations included in the act.

That the act was not repugnant to the due process clause of the Federal Constitution, because it denied to the taxpayers brought under it an adequate hearing before some authorized board or other agency in respect to the amount of taxes to be assessed against them before the assessments become final.

That the act was not void because it prescribed no workable method of apportionment of the intangible values of such companies to the several counties in which the physical properties to which the intangibles relate are situated.

That the method of apportionment adopted by the board was not illegal and void because not authorized by the act.

That the act was not void because the unit or system rule of valuing property for taxation could not validly be applied to the property of appellant.

That the act was not void as being violative of the constitutional provisions fixing the situs of all property for taxation in the counties in which the property was situated, and that the act fixed the situs of intangible properties in the counties in which the physical properties to which it adhered were situated; the Tax Board only being authorized to fix the value of said property and to apportion and certify that value to the various counties where the physical properties were situated.

100 CONNALLY SUITS

Broad operations under act shown in report

WASHINGTON, D. C.

BROAD operations under the Connally contraband oil act during the past year are shown by the annual report of Attorney General Cummings, submitted to Congress January 6.

During the fiscal year ended June 30, last, it was disclosed, 98 criminal and 6 civil cases were instituted by the Government, and 5 civil cases were brought against the Government.

Sixty-one criminal cases were closed by pleas of guilty and imposition of fines; 18 were dismissed, and 19 were awaiting trial at the close of the year. Nine civil cases were won by the Government in the lower courts, 1 was dismissed by the department, 2 were pending appeal to the Fifth Circuit Court of Appeals at the close of the year, and 2 were awaiting trial. All told, 26 cases were pending at the close of the year.

Plea Is Dismissed

INDUSTRY MUST STAND TRIAL ON FIRST TRUST INDICTMENTS

MADISON.

LAST week the oil industry lost in its attempt to have the federal anti-trust indictments returned by the original Madison grand jury quashed on the grounds it was illegally selected. Judge Patrick T. Stone Friday dismissed pleas in abatement through which counsel for the industry sought to obtain freedom for defendants on the first set of indictments. He also ordered 17 individual defendants charged in July indictment to appear in person for arraignment February 1 along with corporate defendants charged in new set of indictments.

The point of dispute was whether two indictments issued by federal grand jury in Madison on July 28 and November 7 were to be dismissed because of irregularities in selecting the grand jury.

Lengthy Arguments Heard

Lengthy arguments by counsel for both sides occupied attention of court all day Thursday.

At beginning of session, William J. Donovan, heading the industry's defense, scored a point when Judge Stone upheld his contention that the government's answer to the plea in abatement filed by defense counsel was not actually an answer but both answer and demur. Donovan pointed out that government must either prove errors in the issue raised by defense counsel with a demur, or take issue with facts set forth in plea of defense counsel and answer them. Judge Stone sustained Donovan's point. Government attorneys elected to demur to the plea in abatement. Course chosen by government counsel makes unnecessary separate trial on defense contention that grand jury was irregularly drawn before actual trial of case on its merits.

Accordingly, Thursday's arguments hinged on whether irregularities in selection of grand jury were of nature to warrant dismissal of charges set forth in indictments returned in July and November.

John Henry Lewin presented government's arguments, citing several court decisions intended to show the issue raised by defense attorneys did not warrant quashing the indictments. Lewin's arguments were answered by Donovan, who cited authorities showing strict adherence to letter of law was necessary.

Decision on issue argued Thursday will not affect two similar indictments returned by a new grand jury just before Christmas. Government attorneys impaneled the new jury immediately after the legality of the old investigating body was challenged and obtained new indictments setting forth same alleged violations and charging practically same defendants.

Meanwhile, defendants charged in new indictments are being arraigned before commissioners in cities of their residence. Those asking removal hearings before appearance in Madison for trial are posting $5,000 bonds. Government forces are asking the removal hearings be conducted late this month.

Urges Retention

PRESIDENT ASKS CONGRESS TO REENACT ALL OIL TAXES

WASHINGTON, D. C.

RETENTION of all federal taxes on oil and its products now imposed was urged upon Congress January 8 by President Roosevelt in his annual budget message accompanying estimates of appropriations which will be required for the operation of the Government during the fiscal year beginning July 1, next. Unless legislation is enacted during the next six months, the taxes will automatically expire.

Accompanying the six billion dollar budget, which is expected to reach almost eight billions when relief appropriations are recommended later, were explanatory statements showing the extent to which the treasury relies upon the oil taxes for revenue.

Source of Much Income

These statements disclosed that the gasoline tax, from which $177,339,587 was collected during the fiscal year ended June 30, last, is expected to provide $195,000,000 during the current year and at least $204,000,000 during the 1938 fiscal year. The tax on lubricating oils, which provided actual revenue of $27,102,831 last year, is expected to bring in $31,400,000 during the coming year and at least $33,300,000 in 1938. The $9,793,995 actually collected from the tax on transportation of oil by pipe line last year is expected to provide $10,700,000 during the current year and $11,000,000 during the following 12 months, while $1,000,000 a year for both years is anticipated from the processing tax on crude oil, from which $1,163,754 was raised during the period ended with last June.

These four taxes, the statements showed, are expected to bring in at least $238,000,000 during the current year and over $249,000,000 during the coming year.

"I recommend that the Congress take steps by suitable legislation to extend the miscellaneous internal revenue taxes which under existing law will expire next June and July," the President said in his message, "and also to maintain the current rates of

[*Continued on page 42*]

Giant Concession

240,000 SQUARE MILES IN AFGHANISTAN TO AMERICANS

NEW YORK.

AMERICAN geologists and petroleum engineers soon will enter Afghanistan to take initial steps in developing what has been described as one of the world's "most promising and largest potential oil prospects," if the assembly of that nation looks with favor upon results of the last several months' negotiations of its foreign minister with American enterprise.

Subject to Approval

Subject to approval of Afghanistan's assembly, Inland Exploration Company, New York, a subsidiary of Seaboard Oil Company, has been granted a 75-year petroleum exploration and exploitation concession on 240,000 square miles in Afghanistan, a nation with an area of approximately 245,000 sqare miles.

John M. Lovejoy, president of Seaboard Oil Company and of Inland Exploration Company and of the American Institute of Mining and Metallurgical Engineers, stated in New York December 30 that particulars of the concession are being withheld pending approval of the grant by the Afghan assembly.

Charles C. Hart, former American minister to Albania and Iran, and Frederick G. Clapp of New York, one of the world's leading geologists, are given credit for having negotiated the concession with the government of Afghanistan. Dr. Clapp, now headquartered in Teheran, is a past president of the American Institute of Petroleum Geologists and has contributed more papers, perhaps, on geology of foreign nations to geological literature than any living American geologist. He has been abroad since early in 1936. Hart was requested in 1933 by the Afghan

[*Continued on page 45*]

Industry Closes Year In a Strong Position

By L. J. LOGAN, Associate Editor

Continued heavy consumption offsets large production caused by higher allowables and less strict control in December. However, decline of crude stocks is checked and gasoline storage increases.

WITH the benefit of sustained heavy consumption of petroleum products, the oil industry is continuing to cling to the strong statistical position that it has gained through several years of rigid self-discipline.

In the past few months there has been a slight relaxation of the previously rigid control of crude production, as some of the leading producing states have liberalized allowables.

But so far the loosening of the restrictions has not had any particularly alarming effect. The more generous allowables have not caused any abnormal additions to storage, as was feared, the large consumption having absorbed the output.

Small Change in Stocks

Crude oil stocks, in fact, were reduced a little in December, although that withdrawal probably was not entirely justified, in view of exceptionally heavy refinery operations. While the industry dipped into crude stocks somewhat, in addition to using the output of the wells, it turned out more than a normal production of gasoline, causing a greater than normal building up of the gasoline stocks.

If the gasoline storage had been increased in December, 1936, only as much as in recent previous years, the crude requirements would have been sufficiently smaller to eliminate the need for any withdrawal from storage. Thus, if the gasoline production had been normal in December, the crude stocks would hape shown no change or possibly an increase for the month.

Storage Decline Interrupted

At any rate, the December statistics demonstrate that the industry finally has had an interruption of the previously long prevailing situation in which crude production was held always a little under the consumer demand. There has been an interruption of the long sustained withdrawal from crude storage. Instead of diminishing storage, the industry has run into unchanging storage.

For the future, it is indicated that this new condition of stocks will continue indefinitely, with the inventories remaining stationary or possibly increasing.

For January, the prominent producing states have prescribed crude production allowables involving about the same degree of restraint as in December. Consequently, the fluctuations of stocks in January likely will be about in line with those in December. The storage probably will remain about unchanged or else increase somewhat.

Naturally, this new situation in production control and the new prospects regarding storage are not as encouraging as the conditions that previously

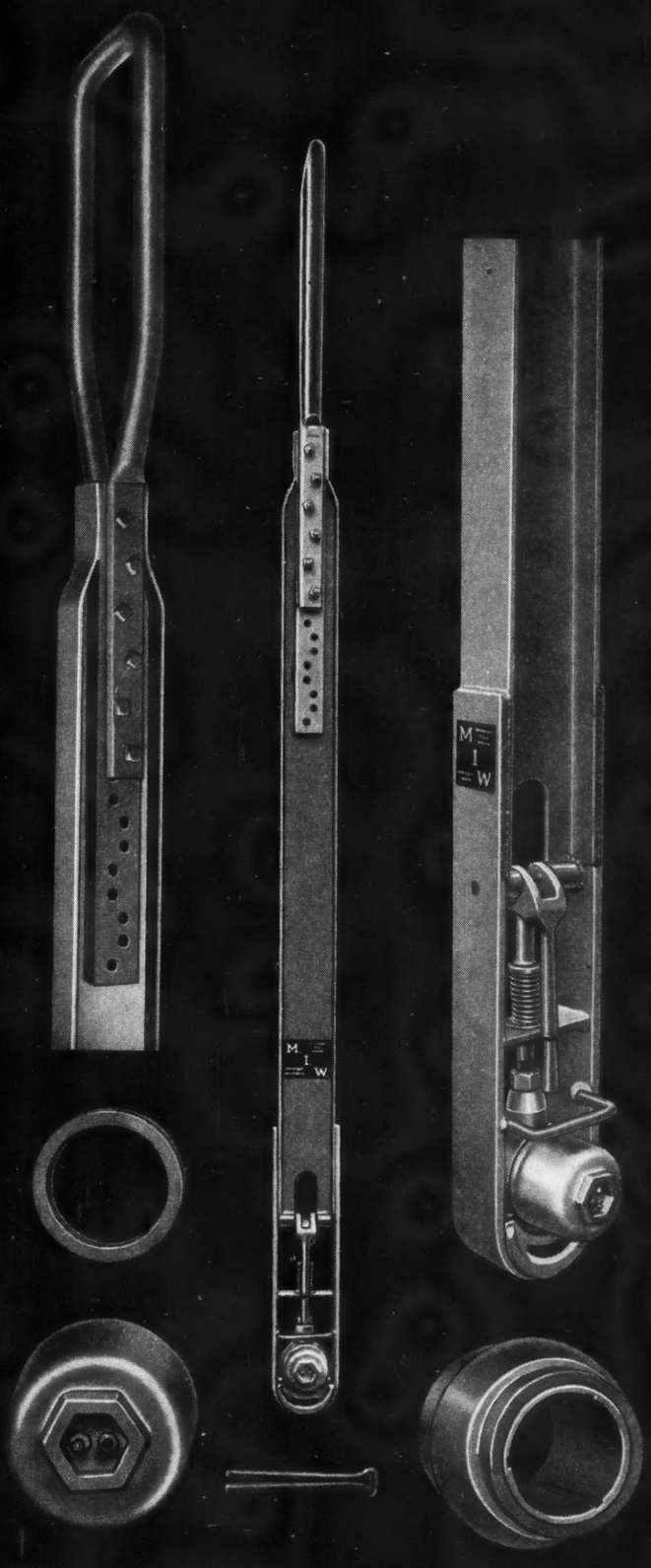
United States Drilling and Production, December, 1936, and Cumulative for Year

STATE OR DISTRICT	MONTH OF DECEMBER, 1936						CUMULATIVE, JANUARY THROUGH DECEMBER, 1936					
	*Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	Total Bbls. Oil Prod.	*Completions	Oil Wells	Gas Wells	Failures	Initial Prod. Bbls. Daily	Total Bbls. Oil Prod.
Arkansas	7	3	1	3	625	869,650	90	20	4	66	6,804	10,676,450
California	87	52	....	35	24,275	18,209,200	1,123	781	12	330	360,110	214,883,624
Colorado	1	....	....	1	.....	113,650	19	8	2	9	5,971	1,642,800
Eastern States	192	42	102	48	1,334	3,563,850	2,959	887	1,294	778	22,447	40,019,850
Illinois	....	....	....	....	.....	.....	4	.....	4	....	.....	.....
Indiana	....	....	....	....	.....	.....	165	31	57	77	868	.....
Kentucky	20	8	1	11	238	.....	273	179	8	86	10,565	.....
Ohio	142	32	76	34	1,090	.....	1,918	538	860	520	9,993	.....
West Virginia	30	2	25	3	6	.....	599	139	365	95	1,021	.....
Kansas	176	121	9	46	159,873	5,286,000	1,722	1,229	62	431	1,283,347	56,620,350
Louisiana	79	41	11	27	19,555	7,457,550	994	646	123	225	1,259,273	80,585,150
North Louisiana	35	15	11	9	9,586	2,475,400	556	354	113	89	1,097,261	26,706,850
South Louisiana	44	26	....	18	9,969	4,982,150	438	292	10	136	162,012	53,878,300
Michigan	47	18	8	21	2,992	868,550	756	322	200	234	53,507	12,096,200
Montana	15	12	2	1	1,439	560,350	193	138	19	36	13,312	5,701,100
Nebraska	....	....	....	....	.....	.....	1	.....	....	1	.....	.....
New Mexico	43	41	2	....	65,690	2,647,100	564	523	15	26	879,709	26,504,750
Oklahoma	223	157	14	52	251,278	18,041,400	2,856	2,004	132	720	4,073,162	200,639,400
Southeastern States	....	....	....	....	.....	.....	12	.....	1	11	.....	.....
Alabama	....	....	....	....	.....	.....	2	.....	....	2	.....	.....
Florida	....	....	....	....	.....	.....	2	.....	....	2	.....	.....
Mississippi	....	....	....	....	.....	.....	8	.....	1	7	.....	.....
Texas	1,011	766	27	218	1,211,248	37,341,700	12,527	9,459	359	2,709	14,258,370	417,738,600
East Texas	242	233	....	9	790,301	13,811,700	2,963	2,785	5	173	9,944,296	160,356,300
East Central Texas	15	8	1	6	9,919	2,726,000	230	159	13	58	377,625	21,613,850
North Texas	175	92	....	83	13,711	1,999,850	2,179	1,204	6	969	163,468	22,039,950
South Texas	254	185	5	64	89,747	5,527,300	3,321	2,471	99	751	1,212,191	36,078,100
Texas Gulf Coast	80	59	3	18	20,824	5,181,750	1,127	816	35	276	329,679	82,690,150
Texas Panhandle	63	43	16	4	20,885	1,937,950	665	475	159	31	252,613	22,475,550
West Texas	155	136	2	17	264,994	5,128,850	1,579	1,350	17	212	1,963,030	62,492,800
West Central Texas	27	10	....	17	867	1,028,300	463	199	25	239	15,468	9,991,900
Wyoming	16	9	1	6	7,174	1,438,150	102	72	8	22	55,017	14,238,100
Total United States	1,897	1,262	177	458	1,745,483	96,397,150	23,918	16,089	2,231	5,598	22,271,029	1,081,346,374

*December completions cover not the calendar month but the four weeks, or 28 days, ended December 26.

STEEL DERRICKS

M. I. W.



M. I. W. PITMANS

Special features of the M. I. W. Pitman are: toggle joint that is self-locking when closed and a compression spring that holds it open when open.

The stirrup connection to the beam is made through two car channels that are securely welded to the 8-inch wide flange beam, making the bolts work in double shear. Additional holes permit adjustment in length.

The bronze wrist pin bearings are completely enclosed in an oil retaining case which remains on the pin when the toggle is open and the pitman removed.

M. I. W.

WRITE FOR NEW M.I.W. CATALOG

MUSKOGEE IRON WORKS

STEEL DERRICKS SUBSTRUCTURES ENGINE BASES FRAMING SILLS
RIG FRONTS SKID-TYPE HOISTS

1802 Esperson Bldg. Houston, Texas
Gulf States Bldg. Dallas, Texas
Main Office and Plant Muskogee, Oklahoma
Thompson Bldg. Tulsa, Oklahoma
Kilgore, Texas

United States Drilling and Production in 1936 and 1935

STATE OR DISTRICT	WELLS COMPLETED			BBLS. OF CRUDE PRODUCTION		
	In 1936	In 1935	Percent Change	In 1936	In 1935	Percent Change
Arkansas	90	123	—27	10,676,450	11,140,800	— 4
California	1,123	1,092	+ 3	214,883,624	207,899,520	+ 3
Colorado	19	11	+73	1,642,800	1,565,200	+ 5
Eastern States	2,959	2,469	+20	40,019,850	38,348,800	+ 4
Kansas	1,722	1,314	+31	56,620,350	53,013,400	+ 7
Louisiana	994	732	+36	80,585,150	50,299,900	+ 60
North Louisiana	556	321	+73	26,706,850	9,583,200	+171
South Louisiana	438	411	+ 7	53,878,300	40,716,700	+ 32
Michigan	756	602	+25	12,096,200	15,661,300	— 23
Montana	193	171	+13	5,701,100	4,302,050	+ 32
Nebraska	1	.....	....	.....	.....	.....
New Mexico	564	302	+87	26,504,750	19,196,550	+ 36
Oklahoma	2,856	2,320	+23	200,639,400	181,152,000	+ 11
Southeastern States	12	20	—40	.....	.....	.....
Texas	12,527	11,525	+ 9	417,738,600	377,747,050	+ 16
East Texas	2,963	4,196	—29	160,356,300	161,026,700	— ½
East Central Texas	230	239	— 4	21,613,850	17,807,650	+ 21
North Texas	2,179	2,136	+ 2	22,039,950	21,226,250	+ 4
South Texas	3,321	1,950	+70	36,078,100	22,022,150	+ 64
Texas Gulf Coast	1,127	1,103	+ 2	82,690,150	68,323,800	+ 21
Texas Panhandle	665	670	— 1	22,475,550	21,611,550	+ 4
West Texas	1,579	813	+94	62,492,800	56,411,650	+ 11
West Central Texas	463	418	+11	9,991,900	9,317,300	+ 7
Wyoming	102	73	+40	14,238,100	13,271,400	+ 7
Total United States	23,918	20,751	+15	1,081,346,374	973,597,970	+ 11

have prevailed, with control strict and stocks diminishing.

Industry in Strong Position

Nevertheless, the position already attained by the industry is remarkably strong, and the outlook is comparatively favorable. While further withdrawals from storage appear unlikely, it is believed by many that the continued stock reductions no longer are needed; that the past withdrawals already have brought the storage down to a sound economic level. It must be conceded, at any rate, that the stocks are at the lowest levels for many years.

In actual quantity, the present stocks of all oils are the smallest since late 1926, or for 10 years. In terms of days' supply, the current stocks of all oils are the smallest since late 1920, or for 16 years. At the end of October, the total stocks aggregated 527,431,000 barrels, which was equivalent to 148 days' supply at the prevailing rate of consumption.

Crude oil inventories at the end of December were the smallest since early 1924, or for about 13 years. Since demand now is much greater than in previous times, the crude stocks now are at the lowest level for an even greater period, in terms of days' supply.

Markets Are Firm

While the official figures on storage tell the story of the decrease to the unusually low levels, there has also been more concrete evidence of the present comparatively small inventories, in the form of a strong market for both crude and refined oils. Some refiners have been finding difficulty in obtaining adequate crude, and in various sections of the country, premiums have been paid above the regular posted prices. Competition has become keen among purchasers in seeking new well connections. Meanwhile, the markets for refined products also have been comparatively favorable.

In view of the greatly reduced storage, and the accompanying favorable general situation of the industry, it is felt by some that stationary stocks henceforth would be satisfactory, and that there might even be some moderate runs to crude storage without giving cause for alarm.

Nevertheless, any substantial additions to storage at this juncture undoubtedly would be looked upon with anxiety by many.

In fact, the recent developments regarding higher crude prices indicate that there is already a great deal of concern over the recent trends in production control and in storage. Although numerous factors tended to support a crude raise, purchasers proved reluctant to adopt the increase put into effect early in January by several companies.

Crude Production High

In consequence of liberalized allowables in several leading producing states, crude oil production was greatly out of line with the Bureau of Mines recommendations in December, showing an excess approximately 30,000 barrels a day larger than in November. Averaging 3,109,585 barrels daily, the national production in December was 179,285 barrels a day greater than recommended. That excess indicated that

Excesses of Average Daily Crude Production Above Bureau of Mines Recommendations

(Barrels Daily)

Note: Production figures are from American Petroleum Institute Reports.

MONTH	California	Kansas	Louisiana	New Mexico	Oklahoma	Texas	Other States	United States
March, 1936:								
Production	566,510	147,600	191,232	60,532	515,484	1,111,194	236,198	2,828,750
Demand	538,800	142,000	151,400	49,300	506,300	1,104,000	247,100	2,738,900
Excess	27,710	5,600	39,832	11,232	9,184	7,194	*10,902	89,850
April, 1936:								
Production	572,671	153,600	210,642	63,692	550,170	1,145,953	217,872	2,914,600
Demand	552,600	146,000	160,900	63,200	525,000	1,122,800	226,800	2,797,300
Excess	20,071	7,600	49,742	492	25,170	23,153	*8,928	117,300
May, 1936:								
Production	576,643	156,679	228,040	74,600	546,182	1,163,460	230,449	2,976,053
Demand	544,000	150,100	170,500	65,900	538,300	1,132,500	225,000	2,826,300
Excess	32,643	6,579	57,540	8,700	7,882	30,960	5,449	149,753
June, 1936:								
Production	578,240	145,922	222,427	73,033	549,765	1,152,873	231,648	2,953,908
Demand	535,500	153,100	175,700	68,300	552,500	1,125,700	227,500	2,838,300
Excess	42,740	*7,178	46,727	4,733	*2,735	27,173	4,148	115,608
July, 1936:								
Production	574,855	153,251	229,968	74,005	543,822	1,142,690	231,931	2,950,522
Demand	550,800	164,200	186,800	69,400	569,800	1,146,500	229,700	2,917,200
Excess	24,055	*10,949	43,168	4,605	*25,978	*3,810	2,231	33,322
August, 1936:								
Production	578,039	161,779	234,369	77,947	575,421	1,166,564	235,431	3,029,550
Demand	550,000	166,500	188,500	70,100	575,500	1,154,700	231,600	2,936,900
Excess	28,039	*4,721	45,869	7,847	*79	11,864	3,831	92,650
September, 1936:								
Production	576,240	163,557	236,353	78,995	571,297	1,157,593	236,273	3,020,308
Demand	535,200	160,000	186,200	71,600	563,000	1,123,900	224,100	2,864,000
Excess	41,040	3,557	50,153	7,395	8,297	33,693	12,173	156,308
October, 1936:								
Production	579,432	161,311	233,893	80,827	566,716	1,181,800	234,153	3,038,132
Demand	535,300	155,000	189,300	74,200	559,900	1,106,900	221,700	2,842,300
Excess	44,132	6,311	44,593	6,627	6,816	74,900	12,453	195,832
November, 1936:								
Production	584,013	160,772	233,785	83,432	566,258	1,151,233	240,540	3,020,033
Demand	549,600	154,500	198,600	75,600	558,400	1,109,300	224,300	2,870,300
Excess	34,413	6,272	35,185	7,832	7,858	41,933	16,240	149,733
December, 1936:								
Production	587,393	170,516	240,566	85,390	581,980	1,204,571	239,169	3,109,585
Demand	553,400	155,900	204,800	78,300	567,000	1,145,200	225,700	2,930,300
Excess	33,993	14,616	35,766	7,090	14,980	59,371	13,469	179,285

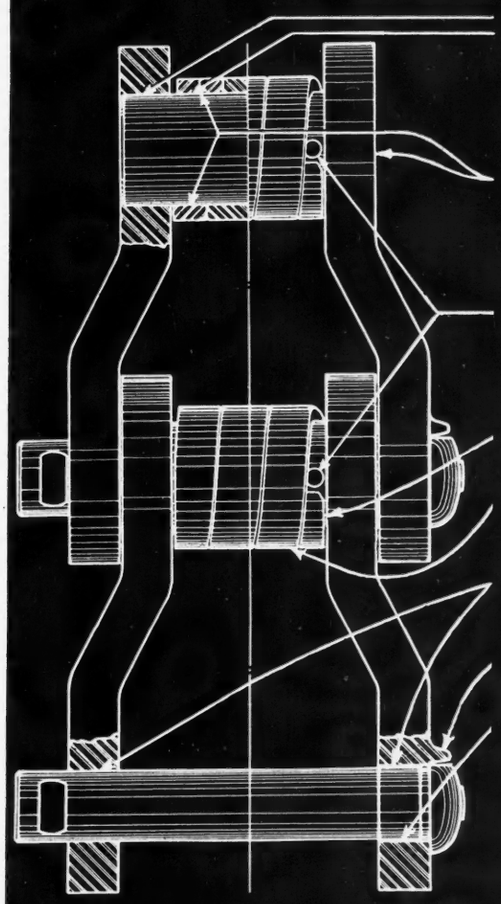
* Under-production.

IDEAL

"Reg. U. S. Pat. Off."

SPIRALOY ROTARY CHAIN

TYPE F



Precision ground bushing tightly pressed into accurately broached holes in side bar insuring true alignment.

Bushing is full diameter throughout its length giving it full strength.

Very smooth finish of bushing both inside and outside provides good bearing surfaces for pin and roller.

Large uncovered oil holes permit unrestricted flow of the lubricating oil to the pin and inside of the bushing

Seamless spiral roller is resilient and shock-absorbing.

Sprocket tooth contacts roller on ground surface.

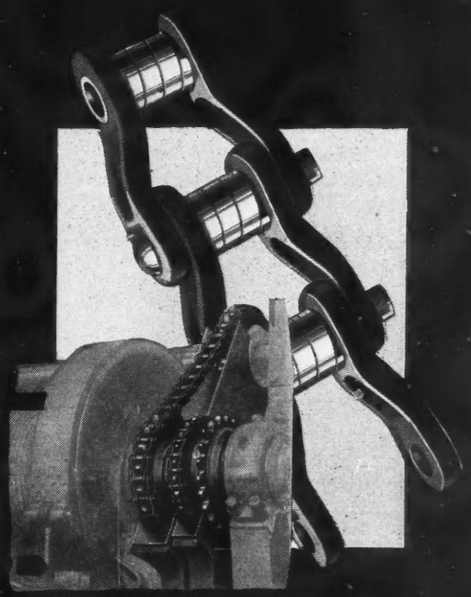
Accurately ground pin pressed in broached holes of side bar.

Pin head lock lug is an integral part of the side bar.

Pin is released when the slightly enlarged section is driven out of side bar.

. . . . carefully engineered to obtain maximum strength and wear resisting qualities. Its design and the materials used in its construction were developed from extensive field tests and experiments.

Manufactured in A. P. I. No. 3 and A. P. I. No. 4 sizes.



Type F Spiraloy Chain installed on Ideal No. 34-9-SOU Draw Works

THE NATIONAL SUPPLY COMPANY

NSCO
REG. U. S. PAT. OFF.

National

production was farther out of line with demand than at any other time during the year. The recommendations were exceeded to a slightly greater extent in October, when an excess of 195,832 barrels daily was recorded, but the October recommendation was more conservative than those that have followed, having embodied provision for taking 60,000 barrels a day out of storage, while the later surveys have not provided for further storage reductions.

Crude Withdrawals Arrested

Figures on crude oil storage during December reflect the recent slackening of the restraints on production. The nation's crude oil stocks were reduced about one half million barrels in the first three weeks of December. In November they had been reduced approximately 2,500,000 barrels. For about six months before November, the storage had been diminishing from 4,000,000 to 7,000,000 barrels a month.

Total stocks of crude oil in the country aggregated 287,909,000 barrels on December 19, according to the Bureau of Mines. They had amounted to 288,630,000 barrels on November 28.

Gasoline Storage Rises

Although it is customary for the industry to build up gasoline inventories during December, the additions this year were greater than in preceding years. The December increase was about 4,500,000 barrels this year, compared with around 3,500,000 barrels in each of the two preceding years.

Reports to the American Petroleum Institute showed that the reporting companies had on hand 47,897,000 barrels of finished gasoline on November 28 and 48,487,000 barrels on December 5. The stocks then were expanded steadily to 51,383,000 barrels December 26 and to 52,603,000 barrels January 2.

The 51,383,000 barrels on hand December 26 compared with 46,472,000 barrels held December 28, a year previously. The gasoline stocks thus had increased 10.6 percent within the year.

Such an increase in gasoline stocks is at least partially justified by the gain that has occurred in gasoline consumption. In the first 10 months of 1936, the gasoline demand ran 10.8 percent higher than in the similar period a year previously, although October, 1936, showed but a 7 percent larger demand than October, 1935.

Drilling Continues Heavy

Another circumstance that is viewed with some misgiving is the continued heavy drilling. During December, drilling continued the same as in November and not far under the peak of the year, which was reached in May. Well completions in the United States averaged 67.7 daily, the same as in November and nearly the same as in October, when the average was 67.8 wells daily. The May peak was 71.9 completions daily.

The December completions brought the total for the year to 23,918 wells, or 15 percent more than the 20,751 wells completed in the previous year.

The 23,918 well completions in 1936 exceeded the 23,463 of 1929, and represented the largest yearly total since 1926, when 28,995 wells were completed.

Finished Gasoline Stocks

(Totals reported to the American Petroleum Institute, by companies owning about 90 percent of the country's refining capacity. Actual totals for nation must take into account the additional stocks not reported.)

DATE	Total Barrels Reported
September 29, 1934	43,850,000
October 27	41,993,000
November 17	*39,892,000
December 1	40,831,000
December 29	43,969,000
January 26, 1935	47,888,000
February 23	54,399,000
March 2	55,654,000
March 16	†57,406,000
March 30	56,388,000
April 27	55,097,000
June 1	53,180,000
June 29	50,007,000
July 27	48,157,000
August 31	43,787,000
September 28	42,976,000
October 26	41,163,000
November 9	*40,780,000
November 30	43,190,000
December 28	46,472,000
January 4, 1936	47,288,000
January 25	50,368,000
February 1	52,831,000
February 29	60,881,000
March 21	†62,855,000
March 28	62,559,000
April 25	61,638,000
May 30	59,589,000
June 27	57,263,000
July 25	54,087,000
August 29	49,952,000
September 26	47,427,000
October 31	48,579,000
November 21	*47,213,000
November 28	47,897,000
December 26	51,383,000
January 2	52,603,000

*Low point of year.
†High point of year.

Wells Completed in the United States

(Including Oil Wells, Gas Wells, and Dry Holes)

MONTH	Daily Average
January, 1933	30.0
February	30.6
March	26.6
April	25.5
May	25.6
June	21.1
July	23.1
August	30.7
September	36.5
October	40.9
November	46.9
December	47.7
January, 1934	39.7
February	38.1
March	40.6
April	44.0
May	50.7
June	51.5
July	53.6
August	51.3
September	43.2
October	49.6
November	49.9
December	48.3
January, 1935	47.9
February	49.6
March	48.8
April	58.5
May	63.6
June	58.6
July	60.9
August	62.8
September	57.9
October	57.1
November	55.2
December	54.2
January, 1936	52.4
February	51.6
March	60.6
April	69.2
May	*71.9
June	70.9
July	66.6
August	70.4
September	65.4
October	67.8
November	67.7
December	67.7

*Highest since July, 1930, when completions averaged 76.6 daily. Average dropped in August, 1930, to 52.4 and remained below that figure until July, 1934.

Crude Oil Stocks

Bureau of Mines figures as compiled monthly, comprising all crude in storage in the United States.

At End of:	Total Barrels In Storage
October, 1934	346,415,000
November	341,165,000
December	337,254,000
January, 1935	338,174,000
February	337,319,000
March	339,139,000
April	339,793,000
May	338,559,000
June	334,757,000
July	329,351,000
August	324,966,000
September	320,705,000
October	317,155,000
November	315,558,000
December	314,631,000
January, 1936	313,081,000
February	310,812,000
March	313,189,000
April	315,389,000
May	315,169,000
June	311,046,000
July	306,390,000
August	301,757,000
September	295,693,000
October	292,271,000

Trend of stocks situation since end of September, figures being from weekly reports of Bureau of Mines.

November 28	288,630,000
December 19	287,909,000

United States Production

(Based on American Petroleum Institute estimates, which do not include oil that may have been surreptitiously produced.)

MONTH	Daily Average (Barrels)	Federal Estimate of Demand
January, 1934	2,233,505	2,183,000
February	2,239,070	2,183,000
March	2,339,950	2,282,800
April	2,420,950	2,366,200
May	2,575,380	2,366,200
June	2,588,100	2,528,300
July	2,560,550	2,530,300
August	2,475,300	2,449,300
September	2,431,950	2,341,700
October	2,364,150	2,325,800
November	2,375,400	2,340,300
December	2,414,600	*2,307,000 †2,460,300
January, 1935	2,500,850	2,460,300
February	2,521,250	2,526,100
March	2,568,800	2,520,300
April	2,559,750	2,527,300
May	2,601,350	2,561,200
June	2,695,100	2,651,000
July	2,707,150	2,660,000
August	2,676,250	2,600,600
September	2,737,750	2,613,000
October	2,780,850	2,554,200
November	2,825,900	2,563,700
December	2,826,850	2,540,200
January, 1936	2,818,300	2,559,200
February	2,774,450	2,648,100
March	2,828,750	2,738,900
April	2,914,600	2,797,300
May	2,976,053	2,826,300
June	2,953,908	2,838,300
July	2,950,522	2,917,200
August	3,029,550	2,936,900
September	3,020,308	2,864,000
October	3,038,132	2,842,300
November	3,020,033	2,870,300
December	3,109,585	2,930,300

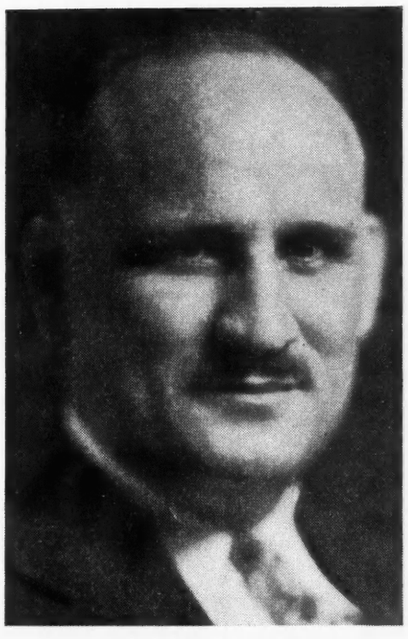
*December 1-16.
†December 17-31.

MEN IN THE INDUSTRY'S NEWS

O. G. LEICHLITER, for many years general superintendent of Weirton Coal Company, Pittsburgh, Pennsylvania, resigned January 1 to devote all his time to the affairs of The Mudge Oil Company, of which he is vice president and general manager, and with which company he has been connected since its organization.

DR. C. IVAN ALEXANDER, Magnolia Petroleum Company, has been elected president of the Southern Louisiana Geological Society. Other officers elected at the regular monthly meeting held January 4 at Lake Charles were: J. S. Kirkendall, Amerada Petroleum Corporation, vice president; W. R. Canada, Stanolind Oil & Gas Company, secretary; and Baker Hoskins, Shell Petroleum Corporation, treasurer.

Elected by A.I.M.E.



WM. V. VIETTI

The Gulf Coast Section of the American Institute of Mining and Metallurgical Engineers elected officers for the coming year on January 5. William Victor Vietti, senior petroleum engineer of The Texas Company, Houston, was selected chairman. He suceeds T. V. Moore of Humble Oil & Refining Company. H. D. Wilde, Humble Oil & Refining Company, Houston, was elected vice chairman, and Alexander Deussen, consulting engineer and geophysicist, Houston, was reelected secretary-treasurer.

Four directors of the organization were elected as follows: H. E. Treichler, Texas Sulphur Company; C. A. Warner, Houston Oil Company of Texas; F. B. Plummer, University of Texas; and Harold Vance of Texas A & M College.

W. B. FLYNN, in the oil business for the past 20 years, has resigned as head of the land department of the Standard Oil Company of Kansas, to assume the same duties with the Wrightsman Oil Company in Tulsa. Flynn started work as a newspaper man in St. Louis, Missouri, working on the old Republican there covering political news. He came to Tulsa and went into the oil business, and was with Sinclair Prairie Oil Company up until about seven years ago. Having spent nearly half of his time during the past four years in working in the fields in southern Louisiana, Flynn says he hopes he is here to stay, although there is plenty of work to be done. "I'm not afraid of that though," says Flynn; "I rather like it." His main hobby is not golfing or riding or shooting as is usual with men who have to spend a great deal of time inside. He reads extensively and has a library of from 2,500 to 3,000 volumes where he spends much of his leisure time.

CLARK MILLISON, for the past six years Regional Geologist in Oklahoma for Shell Petroleum Corporation, is leaving that employment January 15 to open consulting offices in Tulsa. Prior to being transferred to Tulsa, he held a similar position in Kansas for three years. His work in Billings pool was largely responsible for the finding of deeper production zones.

W. S. HILL, who recently resigned from Continental Oil Company as manager of the land and scouting department in the Southern Louisiana district, with headquarters at Lake Charles, has moved to Fort Worth to accept a similar position with Geo. F. Getty Interests.

ROY A. REYNOLDS, consulting geologist and operator, was elected president of the Fort Worth Geological Society at annual meeting held January 4. He succeeds Norman Thomas, geologist for Pure Oil Company. A. L. Ackers, Stanolind Oil & Gas Company, and R. D. Sprague, Sinclair Prairie Oil Company, were chosen vice president and secretary-treasurer, respectively.

RICHARD H. PENCE, engineer in the California Umpire's office in Los Angeles, has been commissioned a lieutenant in the Naval Reserve.

R. P. BOLTON, geologist for Standard Oil Company of New Jersey interests in Europe, lately of 68 Pall Mall, London, has moved offices to Bucharest, Roumania, where he occupies quarters at Bulevardul Tache Ionescu 1, with K. D. White, also lately of London.

LOUIS J. BYRD, who for the past 15 years has been associated with J. I. Staley Company, entered the employ of Thos. D. Humphrey on January 1 as superintendent of production. Hereafter he will make his home in Dallas. Byrd, who has seen service in the East Texas, West Texas, and Panhandle fields, will have charge of production of Humphrey's production in East Texas, the Hawley field of Jones County, and in the Bryson area of Jack County, Texas.

F. A. BUSH of Sinclair Prairie Oil Company was elected president of the Tulsa Geological Society January 4. Other officers for 1937 include R. J. Riggs, Stanolind Oil & Gas Company, first vice president; C. G. Carlson, consultant, second vice president; Clark Millison, consultant, secretary-treasurer, and C. G. Strachan, editor. The board of consult-

Moves Headquarters

C. J. WRIGHTSMAN

Headquarters of Wrightsman Oil Company are to be moved from Tulsa to Fort Worth. Charles J. Wrightsman, president of the company, is a pioneer Oklahoma operator and has been identified with operations and discoveries throughout the state and also in adjoining states. He was born in Dayton, Ohio, September 7, 1868. He established his residence in Oklahoma City in the fall of 1890, after having graduated the previous spring from the Georgetown University School of Law in Washington, D. C. He followed the general practice of law until June, 1905, when he engaged in the oil producing business. In 1906 he moved to Tulsa. In 1908 he retired from the practice of law to devote his entire time to the oil business. Wrightsman was identified early with the Cushing field, completing a commercial well in the same week as the Shaffer discovery well a mile away. Wrightsman is married and has one son, C. B. Wrightsman, president of Standard Oil Company of Kansas.

Wrightsman Oil Company is to be more active than in the past few years. This week it opened offices at Shreveport, Louisiana, and also is increasing its personnel.

ants is composed of B. H. Harlton, Amerada Petroleum Corporation, J. E. Meraro, Skelly Oil Company and W. C. Bean, Shell Petroleum Corporation.

O. Q. LOMAX, formerly mechanical superintendent for Humble Pipe Line Company, has been promoted to the position of superintendent of the southern division. He succeeds H. G. Moberly, deceased.

JOSEPH E. POGUE of New York, and H. M. Stalcup, vice president of production for Skelly Oil Company, are two of the speakers who have been chosen to address the Mid-Continent Section of the American Petroleum Institute when it meet in Tulsa in February. Henry Keplinger, chairman of the program committee made the announcement January 2. General chairman for the Mid-Continent convention is Van D. Bennett, assistant to the general superintendent of British American Oil Producing Company at Tulsa.

F. L. CLEMENTS, JR., who has been superintendent for Humble Pipe Line Company at Luling, has been transferred to a similar position at Conroe.

R. A. HOWE, for many years assistant superintendent of production for Standard Oil Company of Louisiana, has been promoted to superintendent of this department, it was officially announced from the Shreveport office of the company last week. He had been serving in this position, however, for several weeks. He succeeds R. W. (Kid) Lowe, connected with the company since 1910, who recently resigned under the company's annuity and thrift plan. He became connected with the Standard upon the purchase by the company of Benedum & Trees properties in the Caddo (Louisiana) field in 1910.

W. A. HUGG, for several years head of Humble Pipe Line Company's Central Texas district, with offices at Mexia, has been transferred to Corpus Christi.

CHARLES VAN VLECK of Oklahoma City has been appointed field manager of the Independent Petroleum Association of America. Van Vleck's duties will include co-operating with the various state vice presidents and directors in arranging state and district meetings and in procuring additional memberships. Van Vleck was an oil operator for many years in Kansas, Oklahoma and Texas.

B. P. NEWTON, vice president, Gulf Oil Corporation, has been honored by King Leopold III of Belgium, who conferred the decoration "Chevalier de Pordre de Leopold" upon him. Newton is one of a few Americans so honored since the order was founded in 1832 by Leopold I.

BIG INVESTMENT

New York.—The estimated total investment of $13,276,000,000 in the oil industry is apportioned among the various branches of the industry as follows: $5,665,000,000 in production; $270,230,000 in natural gasoline plants; $941,000,000 in crude oil pipe lines; $3,400,000,000 in refining; and $3,000,000,000 in marketing.

M. L. McGANNON, superintendent at Conroe for Humble Pipe Line Company, has been moved to Mexia.

I. F. PETTEY, formerly in charge of Humble Pipe Line Company's Corpus Christi district activity, has been placed in a similar capacity at Luling.

F. F. MAUNEY, JR., formerly in charge of the laboratory of Carter Oil Company in Tulsa, has been made division petroleum engineer with headquarters at Seminole. Mauney succeeds Evan Just, resigned. Charles M. Richardson succeeds Mauney in Tulsa.

C. H. RITZ was the speaker at the January 7 weekly meeting of the Houston Geological Society, discussing the geomorphology of Gulf Coast salt domes.

H. G. MOBLEY, 47, division superintendent, Humble Pipe Line Company, Houston, died January 3 in a local hospital from a gunshot wound suffered three days prior. He had been an employe of the company for 18 years. His wife, mother, two sisters and three brothers survived him.

Kester Very Much Alive

RICHARD B. KESTER, district superintendent of Standard Oil Company of Venezuela at Quiriquire who was reported dead in the November 9 issue of The Oil Weekly, is very much alive, as attested by the following letter:

Quiriquire,
December 19, 1936.

The Gulf Publishing Company,
P. O. Box 2811,
Houston, Texas.
Gentlemen:

An article appeared in the November 9 issue of The Oil Weekly stating that I had recently died in Venezuela. It referred to me as field superintendent of the Lago Petroleum Corporation at Maracaibo, and stated that I had resided in Venezuela for the past eight years.

All of this leaves me in a very uncertain and slightly embarrassing position, and to correct it I would appreciate your inserting another article in the personal column of your magazine stating that I am enjoying good health, have only been in Venezuela two years, and am district superintendent of the Standard Oil Company of Venezuela at Quiriquire, State of Monogas, Venezuela, never having been employed by the Lago Petroleum Corporation at Maracaibo or elsewhere, but, as stated, was employed in Mexico by Standard Oil of New Jersey interests since 1920 and transferred to Standard Oil Company of Venezuela in 1934.

Thanking you in advance for your courtesy, I am,

Very truly yours,
(Signed) Richard B. Kester.

The item reporting the death of Richard Kester came from Mexico from a friend of Kester who was all broken up at the news of his untimely demise. The Oil Weekly regrets publication of the report, and is glad to correct it and to wish Kester many more years of useful and happy life.—Editor.

A. I. M. M. E. MEET
Program offers novel ideas and features

NEW YORK.

AMERICAN Institute of Mining and Metallurgical Engineers has announced the preliminary program of its one hundred and forty-seventh meeting, which will be held in New York February 15-18. Several special features have been arranged.

In the petroleum division, special engineering problems encountered at Kettleman Hills, the acid treatment of wells, fallacies in oil conservation programs, and the need for improvements in rotary drilling equipment are topics to be discussed Tuesday morning. Wednesday will be devoted to statistics, which this year should prove especially interesting, because of increased production in 1936 and the increasing importance of foreign production. The tentative program for the petroleum division follows:

Tuesday, February 16

Special Engineering Problems at Kettleman Hills, California. By H. C. Miller.

Acid Treatment of Wells. By P. E. Fitzgerald.

Need for Improvements in Rotary Drilling Equipment. By J. E. Brantly.

Some Fallacies in Oil Conservation Programs. By William W. Porter, II.

Thursday, February 17

Some Thoughts on Proration. By Joseph E. Pogue.

Various Aspects of Oil Stock Prices. By George W. Doffing.

Discussion of Interstate Oil Compact and Other Oil Control Measures. By Northcott Ely.

Status and Outlook of Petroleum Supply, Demand and Stocks. Author to be announced.

Developments in Petroleum Marketing. By Sydney A. Swensrud.

Can the Rule of Capture Be Rationalized? By Earl Oliver.

The Future of Free Enterprise in the Oil Industry. By Samuel B. Pettingill.

A symposium on domestic oil production will be held Wednesday morning, and the foreign symposium Wednesday afternoon.

Novel Type Session

An innovation will be a session arranged for the special benefit and interest of student associates, members of affiliated student societies and junior members, under the sponsorship of the committee on student relations. Five past presidents of the Institute will be seated at the head table, and they will undertake to answer any questions by the young men regarding their professions, careers, or related matters. Questions may be asked from the floor, or preferably may be submitted in writing in advance to Dr. George B. Waterhouse, chairman of the committee on student relations.

The Bermuda cruise is again available after the annual meeting program. The party sails from New York on the "Queen of Bermuda" at 3 p. m., February 19, and returns to New York February 26 in the morning. For special rates and other details write John T. Breunich, 29 West 39 Street, New York.

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Water Control With Air Pressure Revives Wells

By F. R. COZZENS,
Equity Oil & Gas Company, Stockport, Ohio

Wells abandoned because of excessive fluid volumes are being returned to production, and other small producers are being kept profitable, by freeing oil sands of water through a simple air pressure process.

OF all known agents, fresh water is the most destructive to oil-bearing sands. Its presence has accounted for thousands of ruined wells and for countless miles of damaged territory. Control measures are complicated by reason of the fact that certain oil-sands hold water, and in many fields there is a continual seepage of water into the sands because of improper plugging of abandoned wells. Under such conditions, the only recourse is to drain the sand of its accumulation of water; and the only successful method so far devised within range of the average producer's pocket-book is controlled air-pressure.

An ample proving ground for the solution of both fresh and salt water problems is found in present developments in the Berea and Cow Run fields of southeastern Ohio. Air pressure was first applied to these fields about 1915, for the purpose of driving oil through sands where the natural rock pressure was exhausted. It was eventually tried on wells that had been ruined by water. After they had been subjected to pressure for some time, certain of these wells were opened, and shortly afterwards operators were surprised to find that they contained oil instead of water.

Water Seeks Lower Level

In seeking the cause of this reaction, operators discovered that water, because of its weight, invariably sought the lower levels and the more open channels in the sand, while the lighter oil was forced upward and sideways into the upper strata. It was assumed that if the water could be pushed back, the oil would creep in from the top and sides and thus refill the reservoir. Operators began working on this theory with the result that water reservoirs as much as 100 barrels daily volume are being depleted or drained entirely in more than 85 percent of recorded cases.

When fresh water is first noticed in a producing oil well the general practice is to remove the tubing and rods, and attach a valve-head to the casing. Air furnished by a stationary engine-driven compressor, usually of 6-cylinder construction, is next forced down the hole. When pressure at the casing head registers 800 to 1000 pounds, the valve is opened and allowed to blow-off. Of course, both the oil and the water in the sand are under the same pressure but the oil, being confined in the sand nearer the well for the reasons previously explained, is the first to return to the pocket or reservoir. Pumping equipment is then installed, and the accumulated oil withdrawn. As the oil is pumped from the reservoir, the water naturally replaces it. However, as great quantities of water were forced deeper into the recesses of the sand during the period of air pressuring, the amount reaching the well is correspondingly less. When its appearance is again noticed, air pressure is applied a second time and in the same manner. Three to five such treatments usually suffice to check the water menace in ordinary wells. In many cases wells abandoned for years because of water have been brought back into normal production within a period of three months.

Valuable in Redrilling

Water control, managed by air-pressure is proving especially valuable in the re-drilling of abandoned territory where surface water has crept in from improper plugging of old wells. In certain districts it has been possible to force the water back to the vicinity of its source where it can be readily pumped out. Equity Oil & Gas Company recently carried out this process to a point on a lease near Chesterhill, Ohio, where an accumulated volume of water was blown out of an abandoned well by air-pressure, registering 1000 pounds. In 2000-foot territory in the vicinity of Zanesville, Ohio, similar good results are being obtained from suction pumps. In the more porous sands of southern Ohio and West Virginia, the general procedure is to force water entirely out of the rock into shales underneath by pressure of 1000 to 1200 pounds. In practically all cases, there has been a gradual return of oil as water receded, and careful checkups show marked improvement in sand texture and productiveness.

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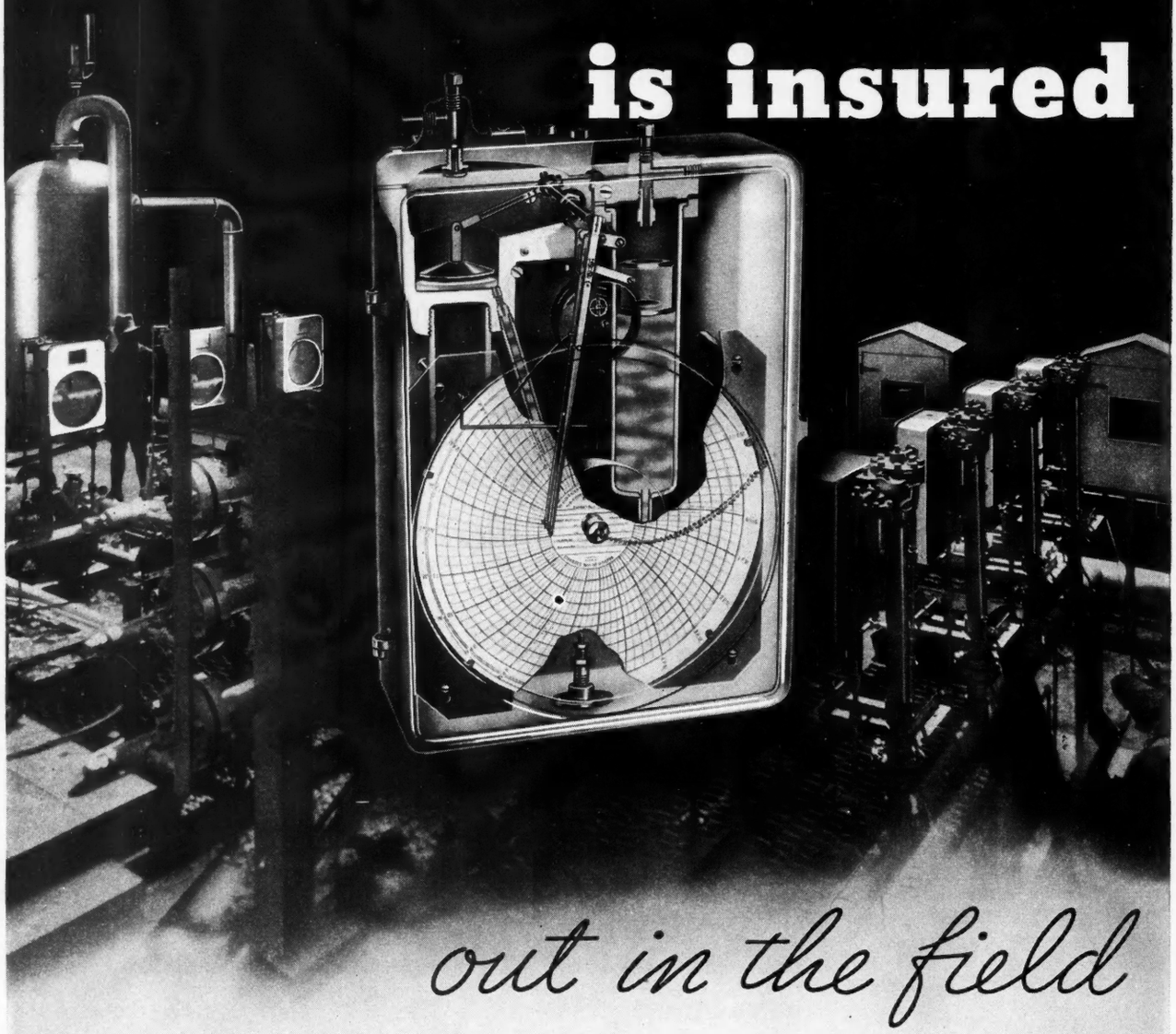

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A Study of Bottom-Hole Flowing Pressures

By S. F. SHAW, Consulting Engineer,
San Antonio, Texas

THE past ten years have done much to promote a better understanding of the factors that have a bearing on the quantity of oil that can be produced from a well through a given size of pipe. Since possibly 40 to 50 percent of the total production of the United States is being produced at the present time from wells flowing naturally and artificially, it is not difficult to understand the importance that attaches to the factors influencing the flow of oil through various sizes of pipes.

Four main factors are recognized as being of major importance in governing the rate of production, whether this rate be the maximum rate possible to obtain, or whether it be a low rate governed by conditions of proration. These factors are:

1. Pressure in the reservoir.
2. Permeability of the sand.
3. Condition of the well at the sand face.
4. Size of the flow string, including both length and diameter.

The reservoir pressure has an important bearing on the capacity of the well. Other things being equal, the higher the reservoir pressure the greater will be the flowing pressure, even though the flowing pressure must always be lower than the reservoir pressure. If there be no difference between the reservoir pressure and the flowing pressure there can be no flow into the well. The greater the differential pressure, the greater is the flow into the well down to some minimum point. The higher the flowing pressure, the greater is the quantity of oil that can be produced through a given casing string.

Govern Flow Rate

The permeability and thickness of the sand will govern the rate of flow through the sand, and will influence to a large degree the flowing pressure at the well. If the sand be only slightly permeable, particularly if the sand thickness be low, a high reservoir pressure will result in a small production even though the flowing pressure at the bottom of the well is greatly reduced below the reservoir pressure. On the other hand, if the sand is highly permeable, as in the so-called Wilcox sand in Oklahoma, the flow into the well may be comparatively high when there is only a moderate differential between the reservoir pressure and the flowing pressure, as in the Tonkawa field and in the various Seminole pools. When, in addition to the permeability being high, there is a great thickness of sand, as in the Oklahoma City field, the flow into the well may be at an enormous rate. It has been shown that a differential pressure of approximately ten pounds per square inch in various sections of the Wilcox sand in the Oklahoma City field is capable of permitting a production of 2000 barrels per day. Advantage can be taken of this high rate of flow only when the wells are completed with large size of casing, owing to the great depths in this field, particularly when reservoir pressures have declined to a comparatively low point.

Small Casing Handicap

The use of 6⅝-inch and 7-inch O.D. casing in the Oklahoma City field has been disastrous for maintaining production when the wells cease to flow naturally, owing to the small diameter, and to the necessity of reducing the flow area by running tubing in order to flow the well artificially. It will be interesting to note the effect of using small diameters of casing in various Gulf Coast fields where depths of 5000 feet or more are reached, such as Anahuac, Conroe, Flour Bluff, Saxet, etc., after the reservoir pressures have declined to some point below 500 pounds. If it should develop that the permeability is low in some of these fields, perhaps advantage can be taken of the high differential existing between the reservoir and the well to obtain low lifting costs when producing at low rates of production. There would, however, be the offsetting disadvantage that under this condition of low permeability the wells probably would need to be abandoned long before a high percentage of ultimate recovery has been obtained.

The condition of the well at the sand face will have an important bearing on the flow into the well. A large diameter at the sand face will reduce the resistance to flow into the well, and therefore, result in larger capacity for a given differential between the reservoir and the flowing pressure. A sand face severely choked with mud, paraffin, or other substance that fills up the pores, will result in a much reduced flow into the well for a given pressure differential.

Whatever be the conditions affecting the flow into the well, in a flow string of given size, whether the production be large or small, the flowing pressure will very closely govern the quantity of liquid that can be produced through that flow string, assuming that the pipe be maintained in a clean condition. This applies to any well where the production is obtained on natural flow or on gas-lift. It also assumes that the proper quantity of gas be present with the oil for lifting it to the surface, whether for maximum production or for maximum efficiency.

Numerous tests made on gas-lift wells have always resulted in showing that there is a rate of gas-

flow for a given quantity of oil that will result in lifting the maximum quantity of oil. Any increase or reduction in the quantity of gas from this point will result in a reduced production of oil. This applies to a well flowing naturally as well as to one on gas-lift. The difference between natural and artificial flow lies only in the fact that the quantity of gas in a flowing well cannot be controlled for a given quantity of oil, whereas the input gas in a well on artificial gas-lift can be under close control.

The point as to lack of control of gas on natural flow has been brought out quite prominently in the Oklahoma City field, where excessive quantities of gas from wells on natural flow have resulted in reduced potentials. In some sections of this field, particularly in wells completed with small casings at structurally high points, it has been necessary to open several offsetting wells simultaneously in order that any oil whatsoever could be produced. In other words, it was necessary to withdraw more gas than could be produced through one small casing, in order that the flowing pressure at the bottom of the hole would be reduced to the point where any oil could be drawn into the well.

A well on natural flow in the Capitol section of the Oklahoma City field recently set up a potential of 18,500 barrels per day, accompanied by 50,000,000 cubic feet of gas per day, under existing reservoir conditions. This quantity of gas is excessive, thereby reducing the quantity of oil that could enter the well at the existing bottom-hole pressure of approximately 250 pounds per square inch. There was no way by which this excessive quantity of gas could be reduced, hence a smaller potential had to be accepted than would have been the case had it been possible to reduce the amount of gas.

Size of Flow String

The size of the flow-string will have an important bearing on the quantity of liquid that can be produced under a given bottom-hole pressure. The quantity so produced will be larger with large diameters of casing. Likewise the quantity will be greater with short lengths of casing. In a given field, the length of the casing is fixed by the depth of the oil sand, therefore, cannot be changed. In a new field, after test wells have been drilled, and the various sand characteristics determined as to thickness, permeability, saturation, presence of water, etc., the operator decides upon the diameter of casing to employ. After the well has been completed, no further changes can be made in the casing sizes other than to run an inside string, if conditions make such a procedure desirable. Practically nothing can be done, however, toward changing the casing to a larger one, if this should seem desirable.

With casing sizes fixed, the production obtainable then depends solely upon the flowing pressure that can be obtained at the bottom of the well. The conditions that affect the flowing pressure have already been mentioned. Once having completed the well, however, the conditions that affect the flowing pressure, other than normal decline in the reservoir pressure, cannot easily be changed, and the operator will find it to his advantage to study closely the relationship that exists between flowing pressure and production. Determinations of this relationship have been made for the Seminole pools for various sizes of flow strings, and data are being obtained in the Oklahoma City field. The results of thousands of tests made in the Seminole pools have been published in the form of diagrams,[1] [2] [3] and those for the Oklahoma City field will be published when a sufficient number of tests have been made to insure that no serious errors have crept into the tests. In wells completed with 7-inch O.D. casing in which 2½-inch upset tubing has been suspended, in the Seminole field, the relation between quantity of oil that can be lifted at maximum capacity and bottom-hole flowing pressure is expressed by the formula:

$$P = 2.546\ Br^{0.554}$$

where P is the bottom-hole flowing gauge pressure in pounds per square inch, and B is the quantity of oil in barrels per day of 24 hours. This formula applies only to wells in the Seminole area completed with 7-inch O.D. casing and provided with 2½-inch upset tubing.

Numerous tests positively indicate that other diameters of pipe and oil with different properties, require different formulas to express this relationship.

Examples of the Capacity of Pipes of Various Sizes Under Given Bottom-Hole Flowing Pressures

A laboratory test was made at the University of Wisconsin with 62 feet of one-inch pipe. Under bottom-hole pressure of 22 pounds, the quantity lifted was 439 pounds per day with expenditure of 14.5 cubic feet per barrel. The lifting efficiency at 13.3 percent was very low under this condition.

In another test with 61 feet of 1½-inch tubing, the quantity lifted was at the rate of 1235 barrels per day with bottom-hole flowing pressure of 21 pounds and with consumption of 6.9 cubic feet per barrel, and with lifting efficiency of 28.8 percent. In this same pipe, a much higher lifting efficiency was obtained when producing at the rate of 422 barrels per day, under similar bottom-hole flowing pressure; when using 3.4 cubic feet per barrel, the lifting efficiency was 53.5 percent.

In a test at the University of Wisconsin, in a tubing of 3-inch diameter, 38 feet in length, a production of 3380 barrels per day was obtained with flowing pressure of 13.2 pounds, and with consumption of 5.9 cubic feet of air per barrel.

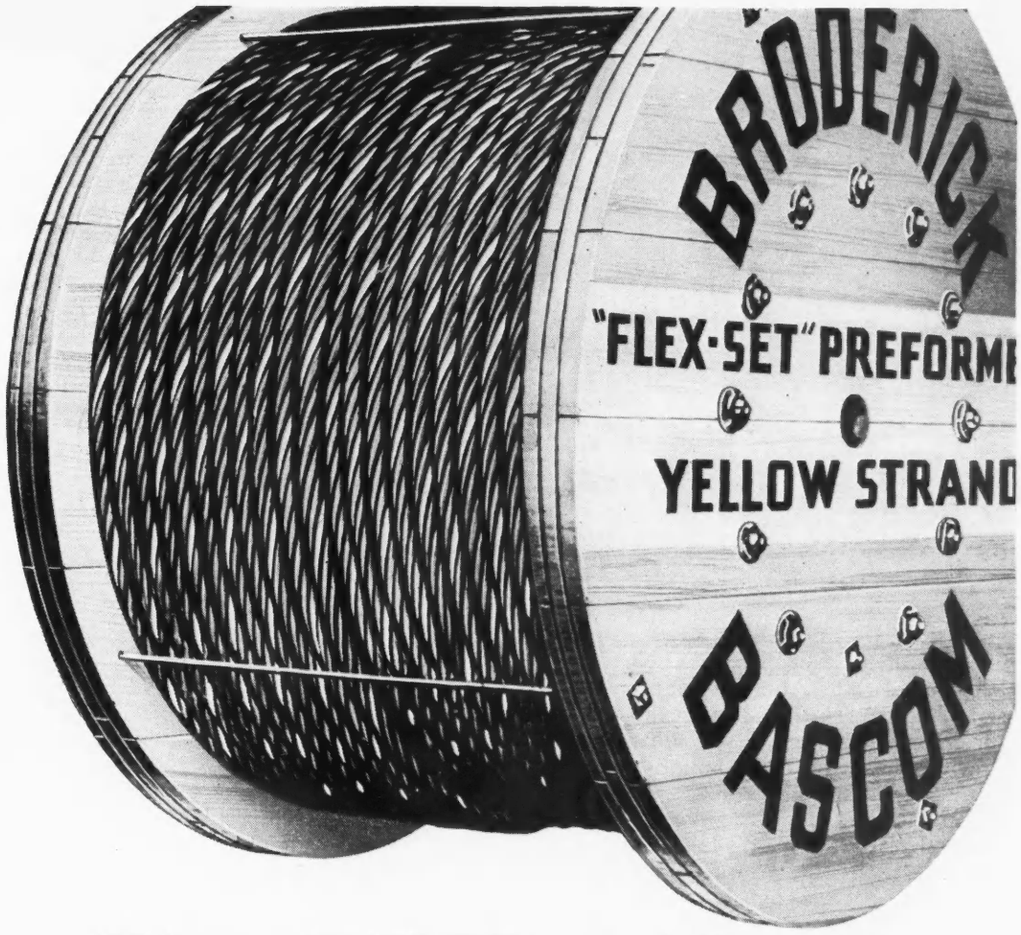
In an installation using 277 feet of 3-inch tubing, with 66 pounds bottom-hole flowing pressure, the production was 3943 barrels of water, with consumption of 31.1 cubic feet of air per barrel, and lifting efficiency was 37 percent.

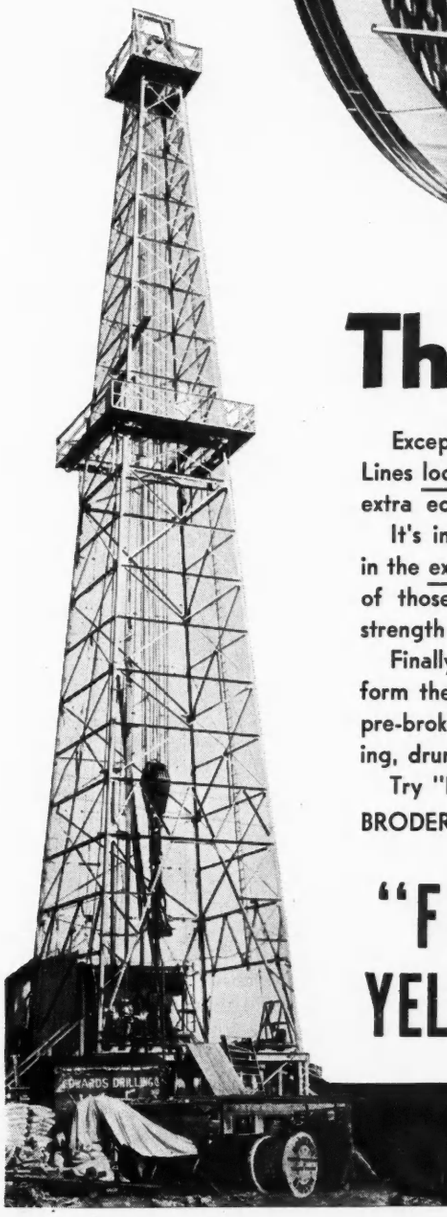
A well equipped with 1880 feet of 3-inch tubing produced 825 barrels of oil per day under flowing pressure of 260 pounds. The consumption of gas was 292 cubic feet per barrel, and lifting efficiency was 37.4 percent.

In an air lift installation at Presall, England, the installation consisted of 323 feet of 4-inch tubing, and production amounted to 8620 barrels of water per day, with bottom-hole flowing pressure of 85 pounds. The consumption of compressed air was 85 cubic feet per barrel. The lifting efficiency was 12.3 percent, which is not very good for the conditions that obtained.

In an installation of 2075 feet of 4-inch tubing in Peru, the production was 1621 barrels per day under flowing pressure of 77½ pounds. The output gas

[1] Comparative Data on Bottom-Hole Pressure and Diameter of Flow Strings in Seminole Pool. Oil & Gas Journal, June 8, 1933.
[2] Some Observations on the Flow of Oil Into Wells. Jour. Inst. Pet. Tech., Vol. 20 (1934) pp 891-900.
[3] Methods for Obtaining Pressure in Oil Production and Their Significance. Oil Weekly, Feb. 4, 1935, p. 33.





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Records obtained from charts on wells produced by plunger lift afford a valuable record of flowing pressures. Note the hook-up here where constant pressure records are procured.

amounted to 735 cubic feet per barrel. The lifting efficiency was 16.2 percent.

In the Bristow field, Oklahoma, the tubing consisted of 312 feet of 3-inch and 2714 feet of 4-inch through which the oil was flowed. Production with flowing pressure of 51 pounds was 292 barrels per day with consumption of 2935 cubic feet per barrel, and lifting efficiency was 9.5 percent.

In an installation of 4-inch tubing in the Seminole field at 4181 feet, the production through the tubing was 1810 barrels per day at 185 pounds flowing pressure and consumption of gas was 1450 cubic feet per barrel, making for a lifting efficiency of 13.2 percent.

Tubing Equipment

A well in the Oklahoma City field was equipped with 6320 feet of 4-inch tubing through which there was produced 4944 barrels of oil per day with flowing pressure of 562 pounds. The quantity of output gas per barrel was 938 cubic feet, and the lifting efficiency was 19 percent.

A well at Seminole was equipped with 7-inch O.D. casing and 2½-inch tubing. Under flowing pressure of 376 pounds, the production through the casing was 7156 barrels per day, with output gas factor amounting to 700 cubic feet per barrel, and lifting efficiency of 17.8 percent.

In the Oklahoma City field a well with 7-inch O.D. casing and provided with 6344 feet of 2½-inch tubing produced 2957 barrels of oil through the casing, under flowing pressure of 375 pounds. Consumption of gas was 2198 cubic feet per barrel, with lifting efficiency of 9.5 percent.

In the Oklahoma City field, a well equipped with 9-inch O.D. casing with 3-inch tubing suspended at 6130 feet, produced 6993 barrels per day through the casing with bottom-hole flowing pressure of 432 pounds. The output gas factor was 946 cubic feet per barrel, and lifting efficiency was 28.2 percent.

In another Oklahoma City well completed with 9⅝-inch casing and with 3-inch tubing suspended at 6500 feet, production was 2066 barrels per day through the casing and the flowing pressure was 152 pounds. The quantity of output gas was 2066 cubic feet per barrel, and the lifting efficiency was 14.9 percent.

In another Oklahoma City well equipped with 9⅝-inch casing and 3-inch tubing the quantity produced was 11,256 barrels per day, with flowing pressure of 361 pounds. The output gas amounted to 1,820 cubic feet per barrel, and lifting efficiency was 12.7 percent.

A string of pipe tapered from 6-inch up to 10-inch at the top, 1,090 feet in length, produced 2,300 barrels of water per day with bottom-hole flowing pressure of 8½ pounds. The quantity of compressed air amounted to 1,247 cubic feet per barrel.

These examples are, perhaps, sufficient to afford a general idea of the flowing pressures required to lift oil and water under different conditions as to diameter and length of pipe. It will be observed that under high lifts and low pressures, the capacity of a pipe is much lower than when the flowing pressure is high and when the lift is not great.

A recent test on a well in the Oklahoma City field under bottom-hole pressure of 46 pounds was 525 barrels per day. The quantity of output gas was 5,560 cubic feet per barrel. This quantity of oil cannot be obtained by any other known method in this field under this condition of flowing pressure, and if the gas supplied to the well to make up for that by which the formation gas is deficient, is compressed at a low cost, the lifting cost per barrel becomes a low figure, even at these great depths. However, this result cannot be obtained under the present state of knowledge of gas-lift operations unless the casing be of greater diameter than is generally employed in oil-field work.

Data are not at hand to indicate what would be the production of the well which made 525 barrels per day with output factor of 5,560 cubic feet per barrel, if it were equipped with a gas-lift and submerged electric centrifugal pump combination method. However, with bottom-hole pressure of 120 pounds, we have learned that the centrifugal pump combination method is capable of lifting 2½ times as much oil as when the well is producing on straight gas-lift. With the much reduced pressure of 46 pounds, the physical condition of the oil at the bottom of the hole may be so different, in that it may be foamy at the inlet to the pump, that it would militate against the pump picking up the oil, and

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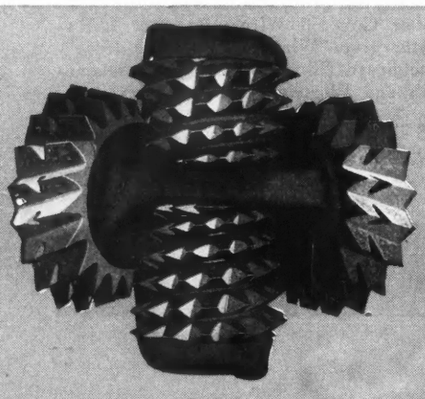
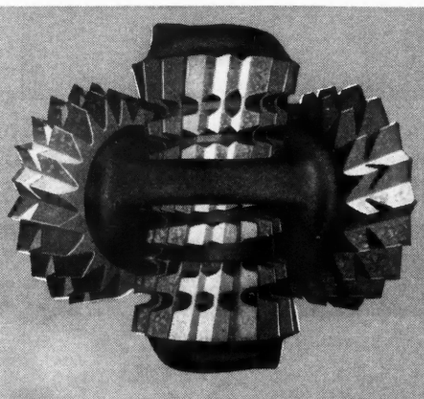
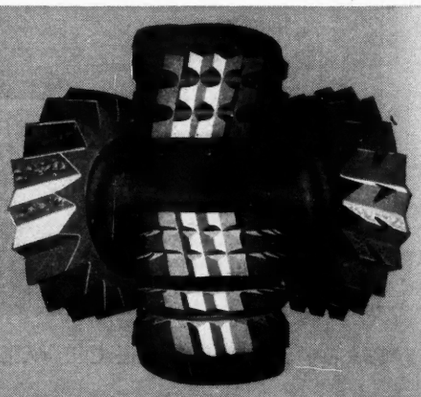


DK-1
For alternate hard and soft formations; shale, chalks, limestones, etc.



DK-2
For hard limestones, sand rock, hard shales and harder formations than those on which the DK-1 is generally used.



DK-3
For cutting hard, well cemented sandstones, very hard limestones, etc.

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lifting it to the point in the well above the packer where the gas-lift becomes effective. On one occasion a well 6,500 feet in depth refused to produce any oil with the pump suspended at a certain depth, but when lowered 30 feet, it produced 4,000 barrels per day. As the pressure declines in the Oklahoma City field, there will be an opportunity to investigate this matter as to the possible use of the submerged electric centrifugal pump with very low flowing pressures.

Taking Potentials by Means of Observing Bottom-Hole Flowing Pressures.

It has been ascertained that with a given size of casing, there results a definite maximum producing capacity with a given bottom-hole flowing pressure. Such determinations have been made for a number of wells in the Oklahoma City field, and they can be employed to guide the operator in ascertaining what the capacity should be at any time. The flowing pressures are very easy to determine, requiring about five minutes at any given time. This method would be quite suitable for taking potentials if the operators had at their command curves for determining the potentials for different sizes of casing. The status of producing conditions in this field is such that there need be no reluctance on the part of the operator to taking any kind of a test if he has properly equipped his well. This he should do in any event, whether for the purpose of taking potentials or for the purpose of producing the well to best advantage.

In the Oklahoma City field, and in other like fields with sands of high permeability and considerable thickness, wells cease to flow naturally while there is yet a large quantity of oil in the reservoir. The flowing pressure may be low, and yet a large quantity of oil can be produced per day. Nearly all wells drilled recently in the Oklahoma City field have been completed with 8⅝-inch, 9-inch, or 9⅝-inch O.D. casing and as a rule, immediately after natural flow ceases, these wells are placed on gas-lift. Experience is teaching operators that in these large holes it is possible to lift a large quantity of oil per day, and under such conditions the amount of gas required per barrel is much lower than when small casing is employed. When pressures are reduced to a low point, deep wells flowed through the tubing or through a small casing cannot be produced efficiently.

Since the oil in deep wells can be lifted through large casing with a much lower expenditure of input gas per barrel than when producing through a small casing, it would appear to follow that the cost of the compressor plant for handling the production in this manner is much lower than would be the case with small casing. Hence, there is much less economic waste when using large casing and flowing these wells at high capacity during the period that the allowable is being produced than when using small casing.

It is a very simple matter to divert the compressed gas from one well to another. Consequently when wells are being restricted severely, the capital outlay for the plant need not be based on that required to flow each well at maximum capacity. Under conditions of maximum production, that is, 100 percent allowable, a plant of a given size would be required to handle one well. In the Oklahoma City field, under prorated conditions, this same plant can be employed to handle from two to ten wells.

A careful study of bottom-hole pressures has shown that the operating costs are much lower when operating at high capacity, for only a short period each month, than when operating at restricted capacity throughout the full month. The lease attendants can be transferred from well to well depending on which well is being flowed, thus affecting a saving in lease labor as well as in compressor plant operations.

The study of flowing pressures in connection with large casings in deep fields has shown that a surprisingly large quantity of oil can be lifted under low bottom-hole pressures, and, therefore, the operator has available a method upon which dependence can be placed to lift the oil, or a mixture of oil and water, from a deep well at much lower operating cost than has hitherto been thought possible. It is believed that many wells in Gulf Coast fields now gradually reaching down to greater depths and which are having a difficult time to show a profit, could be operated at lower cost and at higher capacity, if the wells are properly cased for flowing the production, and if the type of equipment be installed that is capable of handling such production to maximum advantage.

Critical Point of Bottom-Hole Pressure

Many engineers have been in doubt as to the possible critical point of bottom-hole flowing pressure at which there can be no flow of oil from the well. Such a point as yet has not been found by the writer. In an early experience in unwatering a mine, as a test case, water was lifted at the rate of 500 barrels per day to a height of 1,100 feet with a submergence of 6 feet. There was no mistake about the submergence, because it was possible to descend the shaft to the point where the water level actually stood, and it was measured in inches, rather than in feet, to obtain accuracy. However, as greater depth is reached and as the pressure in a given field declines, it is quite true that the capacity of a given pipe becomes reduced, and if the well is completed with a pipe that is too small for the final condition, the capacity is reduced to a non-profitable point, and costs rise correspondingly to the economic limit. This is, of course, unfortunate for that particular well. The remedy lies in learning the lesson, and equipping the next wells with the proper casing.

The study of bottom-hole flowing pressures is very important in the production of wells equipped with sucker-rod pumps. It has been shown that pressures at the bottom of a well have much to do with the satisfactory operation of a beam pump, and that the capacity of the pump is very much dependent on bottom-hole flowing pressures, or submergence[4].

In a case recently noted in the Seminole field, a well was making 380 barrels of fluid, of which 60 barrels were oil, and was reported as pounding fluid, the inference being that the pump was making all the fluid that the well could produce. The well was then equipped with a submerged, electric centrifugal pump, as an experiment, and the production was increased to 2,635 barrels of fluid per day, of which 475 barrels were oil, thus indicating that certain factors were affecting the action of the pump other than the quantity of fluid that was being produced. Careful measurements of bottom-hole flowing pressures under varying rates of production would reveal these conditions.

[4]L. C. Uren, S. B. Sargent and V. K. Collins. Influence of Submergence on the Efficiency of the Oil-Well Plunger Pump. Paper read before the New York meeting of the A.I.M.E. in February, 1926.

IN 1936 CAMERON

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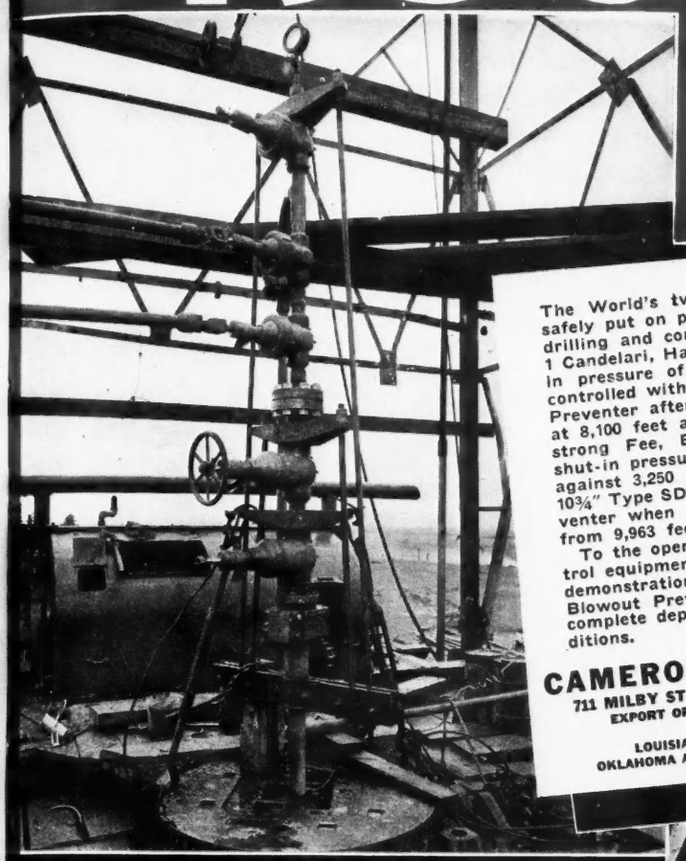

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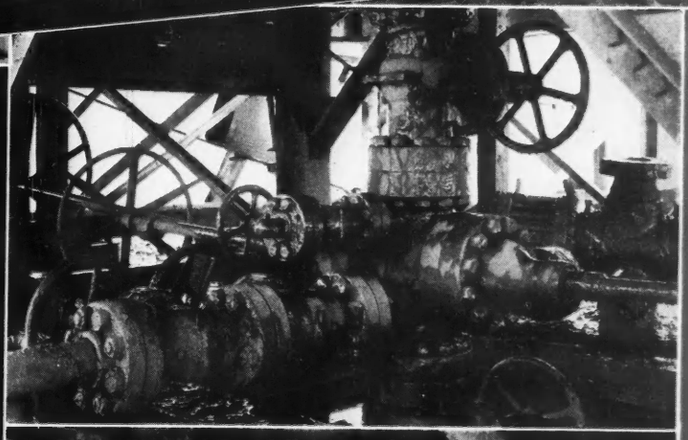
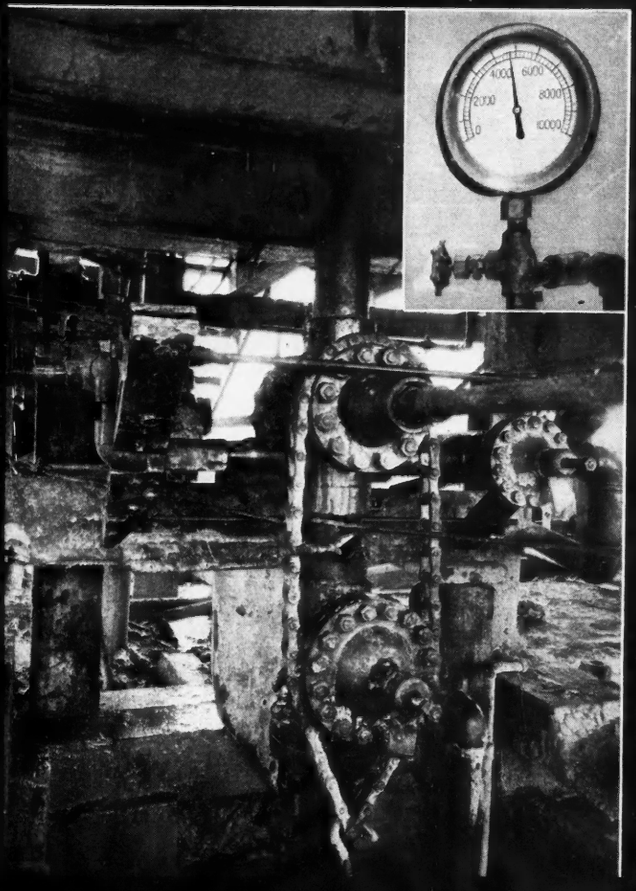
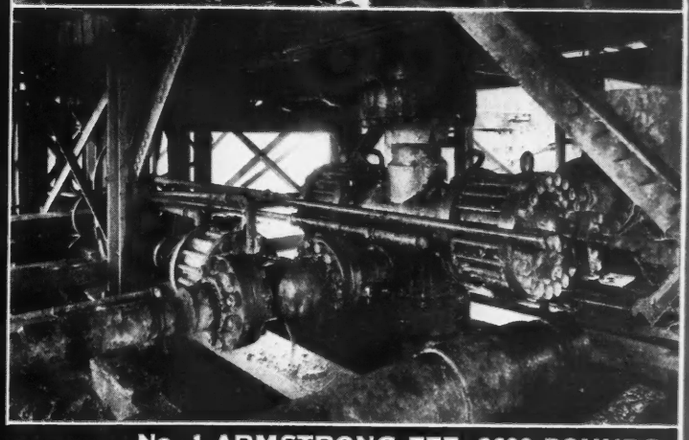
No. 1 CANDELARI, 5100 POUNDS

(Above) Flow control fittings made up on 3" drill pipe suspended on slips in the rotary.

(Below) Cameron Type 7-MH (6,000 pounds test) Manually Operated Blowout Preventer, with rams closed around 3" drill pipe and holding 4,700 pounds pressure, as shown by unretouched picture of pressure gauge to the left. (Inset, upper right hand corner) Enlargement of gauge on casing connections.







No. 1 ARMSTRONG FEE, 3600 POUNDS

(Bottom) Cameron Pressure Operated Drilling Control Hook-up used on No. 1 Armstrong Fee, consisting of Type SDA Blowout Preventer, Type DV Master Gate Valve and Type DV Flowline Valve, all 3,000 pounds test. This hook-up successfully sealed and held 3,250 pounds pressure.

(Center) Hook-up used in drilling-in and completing No. 1 Armstrong Fee, consisting of 2-7" Master Gate Valves with 1-7" Type RH Cameron Manually Operated Preventer between, all 6,000 pounds test.

(Top) No. 1 Armstrong Fee after completion, showing flow connections flanged to drilling-in hook-up shown in center picture. Flow pressure of this well varies between 3,400 pounds and 3,500 pounds.

NEW practices are introduced in running flow string that is completely protected from the corrosive fluid produced in Goose Creek, Texas, well. From top to bottom, no metal is exposed to the fluid produced. The assembly consists of cement-lined casing, bronze lead seal, bronze packer, bushing, liner and screen.

Corrosion Resisting Flow String Is Run

By BRAD MILLS, Associate Editor

A NOVEL casing, packer, liner and screen job to provide resistance to corrosion has been completed in the Goose Creek field by Humble Oil & Refining Company. The assembly from top to bottom included 4085 feet of five-inch cement-lined casing, a bronze-lead seal, five-inch by seven-inch bronze packer, five-inch by 3½-inch bronze bushing and 247 feet of 3½-inch bronze liner and screen.

The life of ordinary screen in the Goose Creek field is comparatively short, due to the very corrosive nature of water produced with the oil. The well, an old producer, originally was drilled to 4335 feet and completed with a conventional packer and liner assembly. Recently the action of the well indicated the need for reconditioning, and plans for working it over called for the ultimate in equipment and methods that would check the corrosive action of certain fluids. The well had been reconditioned on different occasions since its completion in November, 1922, but previous repairs were along the usual lines.

Run Inside Old String

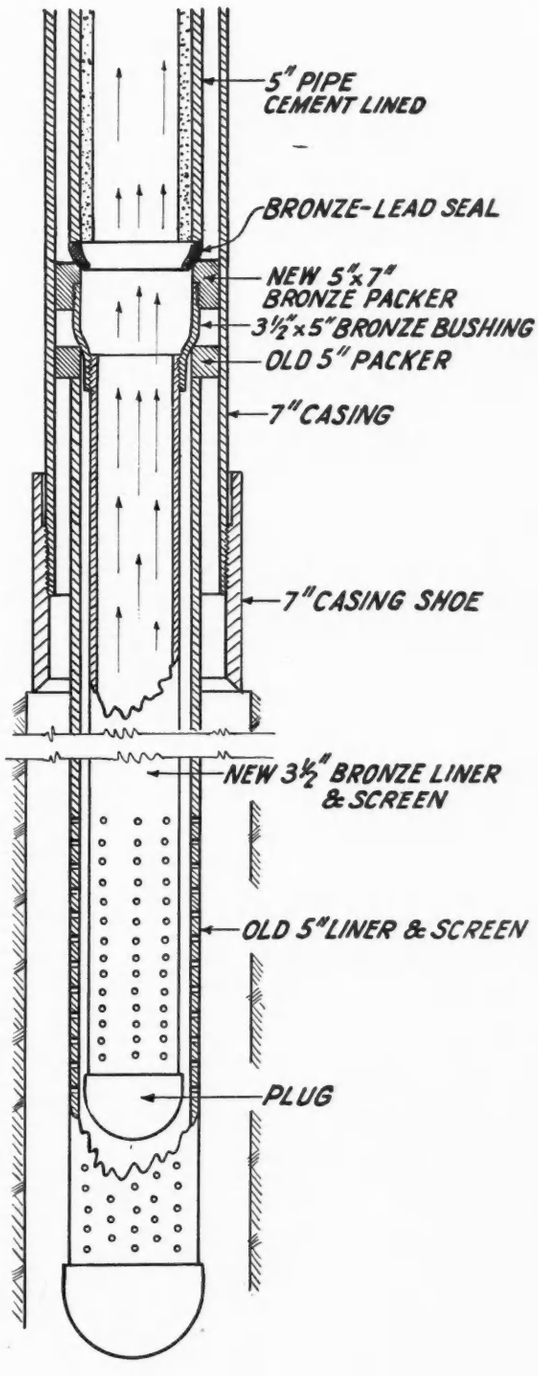
The producer, G. W. Harral 1, originally was completed with seven-inch casing cemented at 4240 feet, and this string still is in service. A five-inch liner and screen, and five by seven packer assembly was run in the usual manner. Top of the old five by seven packer was placed in the seven-inch casing at 4086 feet and top of the liner at 4091 feet. Top of the five-inch screen was at 4238 feet, and it extended to 4334 feet, or within one foot of bottom.

In recompleting the well, the old packer, liner and screen assembly was left intact. A 3½-inch bronze screen and liner assembly was run inside the old five-inch combination. The bottom bronze plug was placed at 4333 feet, or one foot above the bottom of the original five-inch screen. Top of the 3½-inch bronze screen was 4238 feet, which corresponded exactly to the top of the old five-inch screen. The 3½-inch bronze liner extended upward to 4086 feet to reach the top of the old five by seven packer. Into the top of the 3½-inch bronze liner was screwed the bottom of a five-inch by 3½-inch bronze bushing. The top of this bronze bushing was screwed into the bottom of five-inch by seven-inch bronze packer, which was anchored against the seven-inch casing immediately above the old five-inch by seven-inch packer.

Protected Top to Bottom

The arrangement up to this point gave full protection downward from the new five-inch by seven-inch bronze packer to the producing formation below the seven-inch casing shut-off at 4240 feet. Since the well was to be placed on air lift, an especially protected casing string was run from the surface to the packer.

The casing run and successfully landed on the packer was a five-inch O.D., 21.20-pound, cement-lined string that was galvanized on the outside. The inside diameter



Cross section showing casing, packer, liner and screen assembly run in the Goose Creek field by Humble Oil and Refining Company. The arrangement gives full protection to corrosive metals and marks one of the first attempts to use a long string of cement lined casing in a producing well. The drawing is not made to scale, and certain thicknesses are exaggerated to show all detail.

of the steel pipe was 4¾ inches, but with a one-fourth inch thickness of cement, the net inside diameter was 4¼ inches. Weight of the pipe without the cement was 18 pounds per foot. A bronze-lead seal was run on bottom of the pipe to effect a shutoff against the bronze packer.

Believe Protection Obtained

Running and landing the casing against the bronze packer apparently gives the necessary protection against corrosion. Special cement-lined couplings were used, and a special highly resistant joint compound was added as protection to the threads and to cover the exposed end section of the pipe. After screwing up the pipe, the compound hardened to give the equivalent of a full cement-lined inner surface.

The casing was run without a float, the time required for running the full 4085-foot string having been about 18 hours. A mandrel type drift was run after each joint was made up, to eliminate the possibility of a restriction. This obviously increased the running time.

Although the use of cement-lined pipe for surface water lines is not a new practice, its adaptation to oil well use is in the experimental stage. The coefficient of expansion of iron is near enough that of cement to assure a full bond between the lining and the casing under all average temperature changes. Several operators in the past have considered the use of cement-lined casing, but it was not known how well this type would withstand the severe stress and strain of running operations. The string run at Goose Creek by Humble Oil & Refining Company apparently was landed without damage to the cement lining.

Keep Weight Off Assembly

In running the lower part of the new assembly, care was taken to keep undue weight off the 3½-inch bronze liner and screen. This part of the section was suspended so that the 3½-inch bottom plug was 18 inches above the plug of the old five-inch screen. The shoulder of the 3½-inch by five-inch bronze bushing rested on the old packer, eliminating the possibility of added weight from above being thrown onto the 3½-inch liner and screen assembly. The line of weight downward is the old five-inch assembly, and not the new 3½-inch section. The packers obviously carry their part of the load.

A feature of the entire assembly is that no steel is exposed. The corrosive fluid travels the full distance upward without contacting a metal that would be affected by its action.

The manner of effecting a full seal between the cement-lined pipe and the 3½-inch bronze liner also introduced some new practices. The bronze-lead seal, bronze packer, and bronze bushing or reducer definitely completed the new assembly, while leaving the old packer, liner and screen assembly in the hole.

Proper Selection And Installation

OF CRUDE STORAGE TANKS WILL DO MUCH TO RELIEVE CORROSION

By JAY P. WALKER and
C. D. LAIDLEY
National Tank Company, Tulsa

IN prescribing for the care and maintenance of tankage for crude storage covering all classes of materials and types of tanks, it is necessary to consider, not only tanks in general, but the service to which the tank is put and the material of which it is constructed. Proper care and maintenance will prolong definitely the service life of tankage, but careful consideration of the best suited materials for the service will result in savings not possible with care alone. Therefore, material consideration, naturally, falls first in order, even before the tank is purchased and set on location. The kind of tank, whether welded, bolted or of wood also should influence the selection. In proper order it is found that factors entering into the service life and ultimate cost are:

1. Materials used in tank construction.
2. Kind of tank for service requirement.
3. Tank sites, grades or foundations, etc.
4. Salt water and acid disposal.
5. Venting of corrosive gas and exclusion of air from storage tanks.

Materials and Kinds of Tanks

Tanks for the storage and measurement of crude may be used for the storage of sweet or sour crude or crudes with salt water or hydrogen sulphide gas. Each of these services presents a problem of material. In selecting tanks for sweet oil storage it is well to keep in mind the fact that the producing horizon may eventually produce salt water, which would present corrosion difficulties. The storage of the sweet oils alone offers no exacting problems of material selection, but with consideration of eventual salt water inclusion, coupled with the fact that present proration practices may extend the producing life of the wells for an average of at least twice to three times as long as formerly, the most economic procedure would favor the use of tankage suitable for mild corrosion resistance.

For sweet oil requirements tanks of painted steel would be satisfactory, but if the installation is expected to be more or less permanent and the length of service life extended to the life of the well, the use of corrosion proof material such as the addition of galvanizing to steel or wrought iron would probably be found the most economical. This recommendation applies to tanks of bolted construction of comparatively thin material. Heavy welded tanks, due to their wall thicknesses and their natural freedom from leaks, are usually considered as having service life of more than the producing well.

As a summary it may be said of painted bolted steel tanks that they are essentially sweet oil storage, ideally suited for flush and large production requirements; but if permanent long life storage is desired, galvanized steel, wrought iron or some other corrosion resisting material offers more economic possibilities.

In regions where sour crudes are produced, containing highly corrosive agents as hydrogen sulphide, the problem of economic storage that offered promise of definite lasting qualities had, in the past, been rather a matter of conjecture, trial and error. The development of fields producing sour crudes resulted in leases which became conspicuous with the results of futile attempts to provide storage that would cope with the requirements and give reasonable service. Maintenance of facilities became prohibitive and an endless procedure. The service of ordinary materials in tankage became a matter of frequent reoccurring expense and a number of attempts were made to treat existing materials to cope with the situation and to prolong, if possible, the service life. Usually the investment in tankage was the most important expenditure.

The failure of painted steel tanks fostered the search for steel alloy tanks and tanks of other materials offering possibilities of resistance to hydrogen sulphide corrosion. Such attempts resulted in the return to and redesign of wood tanks.

Wood tanks were made to carry pressure, being built with gas tight top heads. All metal parts were made of corrosion resisting materials. Wood tanks

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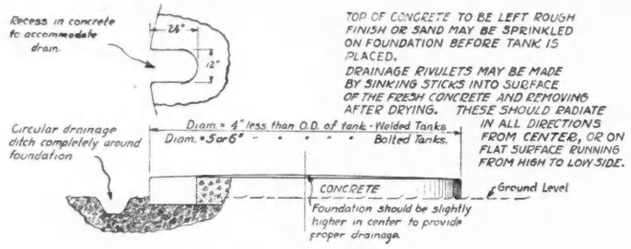

Recess in concrete to accommodate drain.
24"
8"
12"
3
TOP OF CONCRETE TO BE LEFT ROUGH FINISH OR SAND MAY BE SPRINKLED ON FOUNDATION BEFORE TANK IS PLACED.
DRAINAGE RIVULETS MAY BE MADE BY SINKING STICKS INTO SURFACE OF THE FRESH CONCRETE AND REMOVING AFTER DRYING. THESE SHOULD RADIATE IN ALL DIRECTIONS FROM CENTER, OR ON FLAT SURFACE RUNNING FROM HIGH TO LOW SIDE.
Circular drainage ditch completely around foundation
Diam. = 4" less than O.D. of tank - Welded Tanks
Diam. = 5 or 6" - - - - - Bolted Tanks.
CONCRETE
Ground Level
Foundation should be slightly higher in center to provide proper drainage.

CONCRETE FOUNDATION

FIG. 1

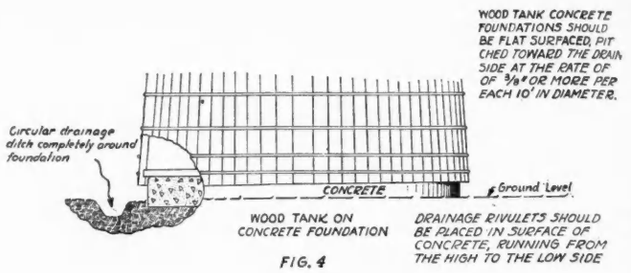

WOOD TANK CONCRETE FOUNDATIONS SHOULD BE FLAT SURFACED, PITCHED TOWARD THE DRAIN SIDE AT THE RATE OF OF 3/8" OR MORE PER EACH 10' IN DIAMETER.
Circular drainage ditch completely around foundation
CONCRETE
Ground Level
WOOD TANK ON CONCRETE FOUNDATION
DRAINAGE RIVULETS SHOULD BE PLACED IN SURFACE OF CONCRETE, RUNNING FROM THE HIGH TO THE LOW SIDE

FIG. 4

offered an improvement, but proper maintenance required constant attention because it was necessary to keep water on the decks to prevent shrinkage of the wood above the oil level.

Other attempts to find suitable materials led to experimenting with bolted tanks of aluminum, steel of high copper content and high chromium steels. Such attempts were successful but the comparatively high cost of the materials and fabrication difficulties were not encouraging. However, such tests indicated that metal tanks offered a very satisfactory solution and comparative service life tests were made on various available metal tanks.

Galvanized iron and steel having been prominently used in industry for various uses that were difinitely corrosive offered possibilities that were worth careful consideration. It was determined that the zinc covering, if applied properly so that the base metal was protected entirely, had resisting and lasting qualities and did not add greatly to the cost of the tank. Ordinary galvanized sheets sufficiently heavy to be satisfactory for bolted tank construction was found to lose protection when the spelter coating was corked in cutting, forming, punching, etc., and to overcome this and other objections hot dip galvanizing after fabrication was resorted to.

Wrought Iron

The use of wrought iron in industry for various services where corrosive fumes, gases and smoke were dealt with brought this material to the attention of tank manufacturers. In being made into tanks both as galvanized and ungalvanized construction, wrought iron offered possibilities. Many service tests were conducted publicly and privately. Batteries of many tanks were installed, being composed of tanks of the common various materials such as steel, galvanized steel, wrought iron and galvanized wrought iron. Such tests offered possibilities for definite comparative service data and the conclusion indicated that the materials tested could be expected to give service when galvanized for periods of one to three times the life of unprotected tank material.

Bolted tanks for sour crude definitely had proved

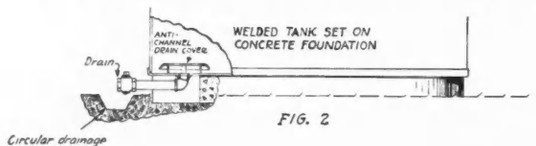


FIG. 2

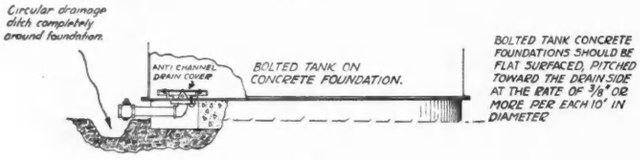

Circular drainage ditch completely around foundation.
ANTI CHANNEL DRAIN COVER
BOLTED TANK ON CONCRETE FOUNDATION.
BOLTED TANK CONCRETE FOUNDATIONS SHOULD BE FLAT SURFACED, PITCHED TOWARD THE DRAIN SIDE AT THE RATE OF 3/8" OR MORE PER EACH 10' IN DIAMETER

FIG. 3

themselves and the use of galvanized materials offered an extended service life to tankage that many times offset the increased cost.

The maintenance of storage tanks, particularly those of bolted construction, is therefore a matter largely of proper materials for the service to which they are put.

Tank Sites, Grades or Foundations, Etc.

Suitable grades can do much to preserve the tank. The laying of the foundation should be done in the best possible manner, to give the tank the assistance of a good base. The grade or foundation can assist in two ways in the preservation and service of the tank. First, by providing a suitable shaped elevation to insure a dry base for the tank, with the proper attention given to ventilation and drainage. Second, a firm base will keep all strains evenly distributed and prevent leaks due to concentrated strains in some seams of bolted tanks and wood tanks.

The top diameter of all grades should be less than the diameter of the tank which is to occupy them. The diameter of welded tank grades should be about four inches less than the diameter of the tank. Bolted tank grades should be five to six inches less in diameter than the tank. Grades for wood tanks should be made a few inches less in diameter than the exposed surface of the bottom.

It is recommended that concrete grades of adequate thickness and design be used in all cases, especially where the installation is to be permanent. The building of this type of grade should be such as to allow for drainage in all directions from the center of the tank. A ribbed surface may be made for this purpose, with the center of the grade slightly higher or bulged shape with ribs or troughs radiating in all directions from the center. A rough surface on the concrete is recommended or the sprinkling of sand on the finished grade before the tank is placed. (See Figure 1).

When earthen grades are to be used, soil analysis should be made to ascertain whether the soil has alkalis or acids which would destroy steel tank bottoms. The harmful effects of certain alkalis on steel always should be avoided. The best method is to use a grade of concrete, but tar paper or roofing material coverings may be used where earthen grades are employed. In laying the paper or roofing it should be so lapped as to completely cover the surface occupied by the tank. The diameter of the covering should be several inches less than the diameter of the tank so that the covering will stop within at least two inches of the outer periphery of the tank. Tar or pitch is also used for insulation with good results, but they are more difficult to apply and great care must be taken with the application so that they will spread thickly over the grade or on the tank bottom, making sure that none of the bottom is left exposed or not covered by the material. In many cases it is expedient and good practice to apply pitch or tar on the tank bottom and lay a covering of roofing paper on the grade before placing the tank on the grade.

Figure 5 illustrates a recommended shape and pitch of earthen grades.

Where tanks are set directly on earthen grades it is well to avoid setting them on any non-porous material such as clay or shale and slate. Bolted tanks and wood tanks, being subject to slight seepage leaks, will deposit salt water, sulphur loaded oils, etc., beneath the tank and these deposits cannot be absorbed and may not be drained off when tanks are set on non-porous material.

In preparing earthen grades, the height should be such as to elevate the tank to provide proper drainage from the grade in all directions. The earth should be well packed down and covered with a porous surface such as crushed rock, coarse gravel chat or sand. Earthen grades should be made with the surface slightly sloped toward the side on which the drain and cleanout will be placed. This slope should be at least 3/8 inch to 10 feet. (See Figure 5).

Salt Water and Acid Disposal

One of the most important purposes of the grade is to provide proper drainage for the interior as well as the exterior of the tank. By proper shape and sloping of the grade toward the point where the drain is located, salt water and much of the basic sediment can be removed completely with each opening of the drain valve, provided proper flush drain opening and cover is used.

Salt water should be released into a trough or some conductor that will permit rapid release from the area around the tank grade. Salt water always should be prevented from saturating any part of the tank grade and to prevent this when syphon arrangements are used, they should be arranged so that wind cannot carry the spray back to the tank exterior or grade. The item of tank cleaning and drawing off of salt water is most important and should be carefully and regularly carried out.

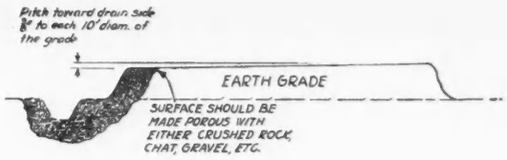


FIG. 5

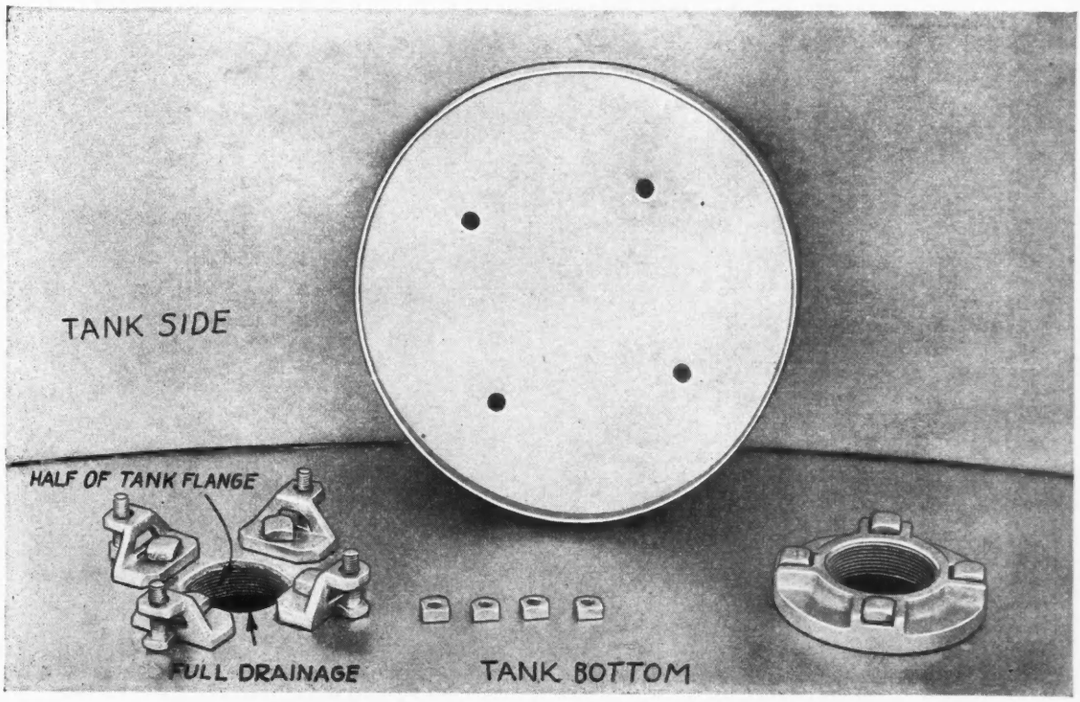
It is an important feature that all salt water be removed from the tanks at each draining. Proper sloping of the grade will assist and the use of a drain cover will assure drainage of the bottom water first when the valve is opened. One such arrangement consists of a large circular plate with a turned down edge, supported above the drain connection in the bottom of the tank. The advantage offered is that flush bottom drainage is secured and by the use of this device tank cleaning requirements have been lessened by much as 80 percent. Figures 2 and 3 illustrate this type of drain.

Flush draining is especially important where wells have been acidized. In some cases the wells are opened before the acid has been completely dissipated and acid will be deposited in the tanks. Since inhibitors lose their effect after a number of hours it is quite necessary that complete bottom drainage of tanks be accomplished.

Interior Treatment Against Corrosion

It is generally agreed that the presence of oxygen is necessary to cause interior corrosion of tanks, and that if oxygen is eliminated from the system, relief from corrosion would be possible. The presence of oxygen in storage tanks is attributed to several causes. First, through natural breathing of the tank. Second, by the frequent opening of thief hatches. The third and chief

The tank drain on the left is constructed to permit flush bottom draining. The cover (standing) has flanged edge that contacts tank bottom when closed. The old type connection on the right makes it impossible to completely and effectively drain all salt water and corrosive acids.



cause is the emptying of the tank into the pipe line. In some cases oxygen may be conveyed to the tanks through the gathering system. In older fields where wells are produced by air lift or where vacuum is imposed upon the wells considerable air may be conveyed into the tanks. In the case of leakage of vacuum systems, the elimination of leaks would eliminate much air entering the system.

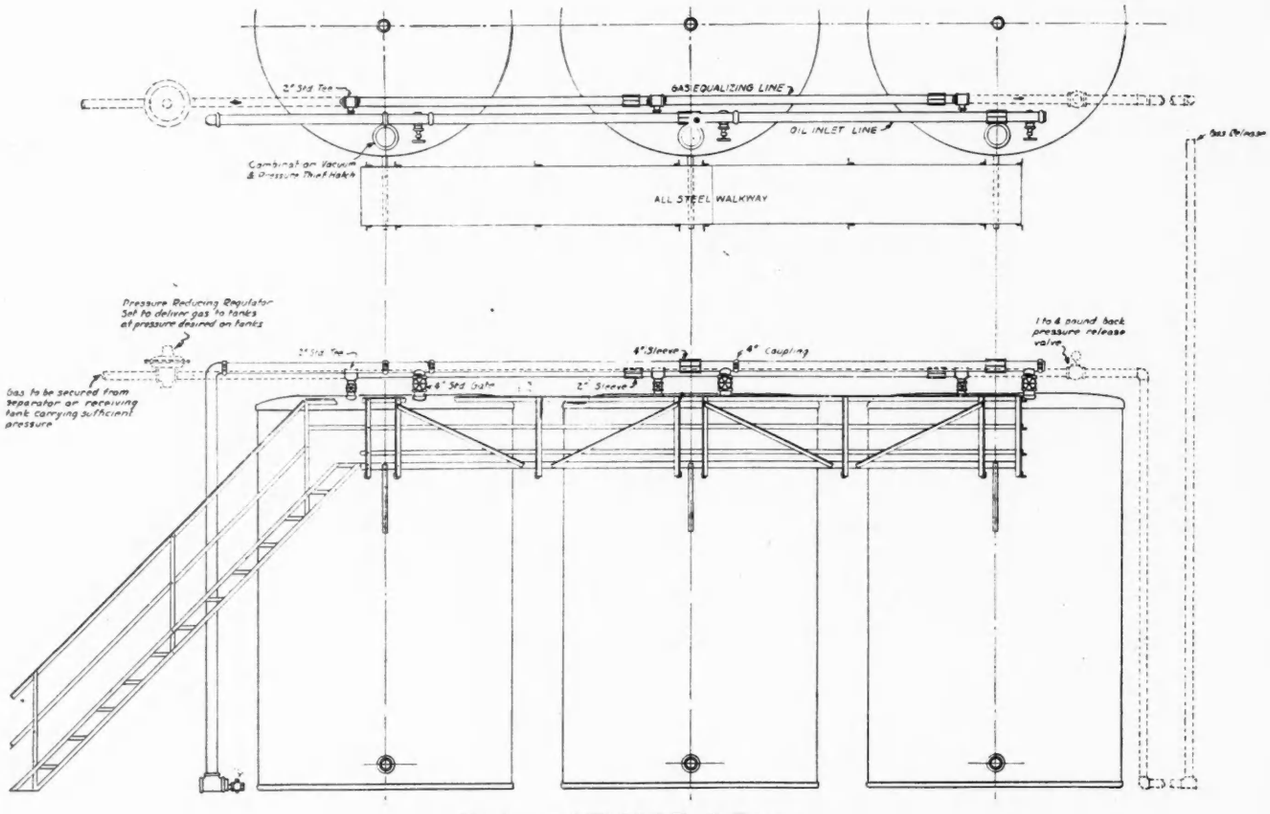
Exterior corrosion may be difficult to eliminate, especially with the use of tanks that cannot be kept tight under pressure. Seepage leaks will cause exterior corrosion at the point of leakage, and wherever possible any leaks should be repaired at once. Bottom leaks would be difficult to discover and correct in most cases and irreparable damage may result before such leaks are detected.

The principal failures among steel storage probably occur in the side sheets adjoining the bottom, although gas space or deck corrosion is quite common. Gas space or deck sheet corrosion may contribute to bottom and side sheet corrosion due to loosened scale from the deck sheets becoming deposited in the bottom of the tank, causing accelerated corrosion of the bottom and side sheets due to cathodic character of the side sheets causing an electrolytic action.

The application of certain asphalt base products and other products not soluable in oil have shown good results when applied in thick coatings of ⅛ inch to one inch. Such applications are most successful when applied after the surface of the tank has been sand blasted carefully. Sand blasting presents a good surface for the adherence of the coating and in many cases this method has been highly successful. This method is especially applicable to tanks already in use, where repair work is necessary and often has been known to prolong the tank life without other repair for several years.

The elimination of the principal causes of interior corrosion can be effected by proper hookup of the tank battery. Illustrated is a tank battery hookup designed for use where corrosive conditions are prevalent. No breathing of free air is possible with this hookup or no air need enter the tanks when they are emptied to the pipeline. This hookup can be effected easily where gas is available, either from the separator or receiving tank which is operating at sufficient pressure. The gas equalizer line extending across the top of the tanks is connected to the gas supply. Reduction of the gas pressure is provided by a reducing regulator which reduces the pressure to that desired to be carried on the tanks. When any of the tanks are emptied or when breathing occurs, gas is drawn from the supply for the replacement within the tanks. When tanks are being filled, the displaced gas is permitted to exhaust to atmosphere through the back pressure valve as shown. With the use of proper combination thief hatches, the vacuum and pressure relieving valves are set so as to relieve above the working pressure of the tanks. They also serve as safety devices to protect the tanks in case of failure of the gas supply or the closing of a gate. When it is necessary to open the thief hatches the escaping gas will prevent air from entering the tank. Thief hatches should not be left open any longer than necessary.

This method of hookup applies to bolted as well as welded tanks. The amount of pressure that can be carried will be according to the kind and condition of the tanks. Properly constructed welded tanks can be operated at pressures up to four pounds. Bolted tanks may carry safely from two to 12 ounces pressures according to construction and condition.


GAS EQUALIZING LINE
OIL INLET LINE
ALL STEEL WALKWAY
Pressure Reducing Regulator Set to deliver gas to tanks at pressure desired on tanks
Gas to be secured from separator or receiving tank carrying sufficient pressure
4" Sleeve
4" Coupling
6" Std Outlet
2" Sleeve
1 to 4 pound back pressure release valve

Hook-up of Welded Tank Battery

TRADITION

Fig. 1740 Gaso Duplex Piston Timken Bearing Power Pump. 54 to 250 Bbls.

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GAS INJECTION INTO REPRESSURING WELLS ACCURATELY CONTROLLED BY

Two-Purpose Manifold

By FRANK B. TAYLOR, Staff Writer

GREYSOLON OIL COMPANY of Independence, Kansas, has developed a two-purpose manifold for gas injection, and is using it in an extensive repressuring program now underway in southeast Kansas. Exhaustive laboratory tests of cores have established detailed information as to distribution of saturation and local variations in permeability, and from the latter facts the most suitable injection volumes and rates of injection have been calculated. More exact and accurate control of secondary recovery projects is a trend that is receiving continually increasing support. The manifold (Figure 1) was selected for its simplicity and because it satisfies all requirements of operation and fabrication, giving at the same time measurement and vernier adjustment of input volumes.

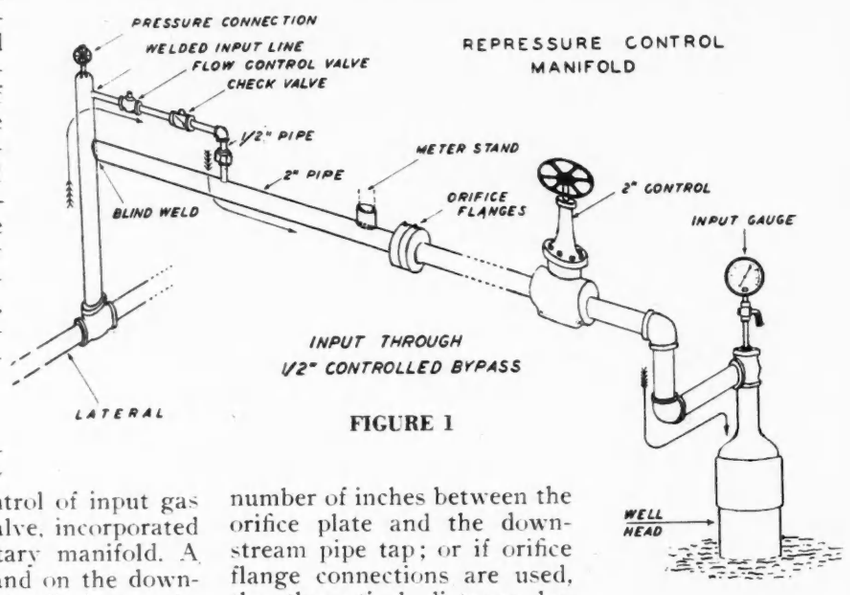


FIGURE 1

Small Valve Control

Diverging from the customary arrangement, the hookup as used by Greysolon Oil Company effects control of input gas volumes through a one-half inch valve, incorporated within a one-half inch supplementary manifold. A check valve in the same manifold and on the downstream side of the half inch control, eliminates the possibility of gas returning to the field repressuring lateral from the well in case of line break or other failure that might produce a drop of pressure in the field system. The two mentioned fittings are connected by a union to complete the one-half inch assembly that is welded into the two-inch run and into the riser from the field line.

The master injection manifold is of two-inch pipe connected through the secondary manifold to the riser from the field lateral. At the top of the first riser is a bull plug, valve-controlled, to allow operators to determine the field pressure existing upstream from the injection manifold. The horizontal member is welded blind to the riser. This adds to the rigidity of the unit and makes bracing less necessary.

Orifice meter flanges are located at the approximate center of the run for the installation of plate and meter for measuring the input volumes. Downstream from the orifice plates a two-inch master gate is placed for shutting off the manifold during repair or where a gate is not included at the well head.

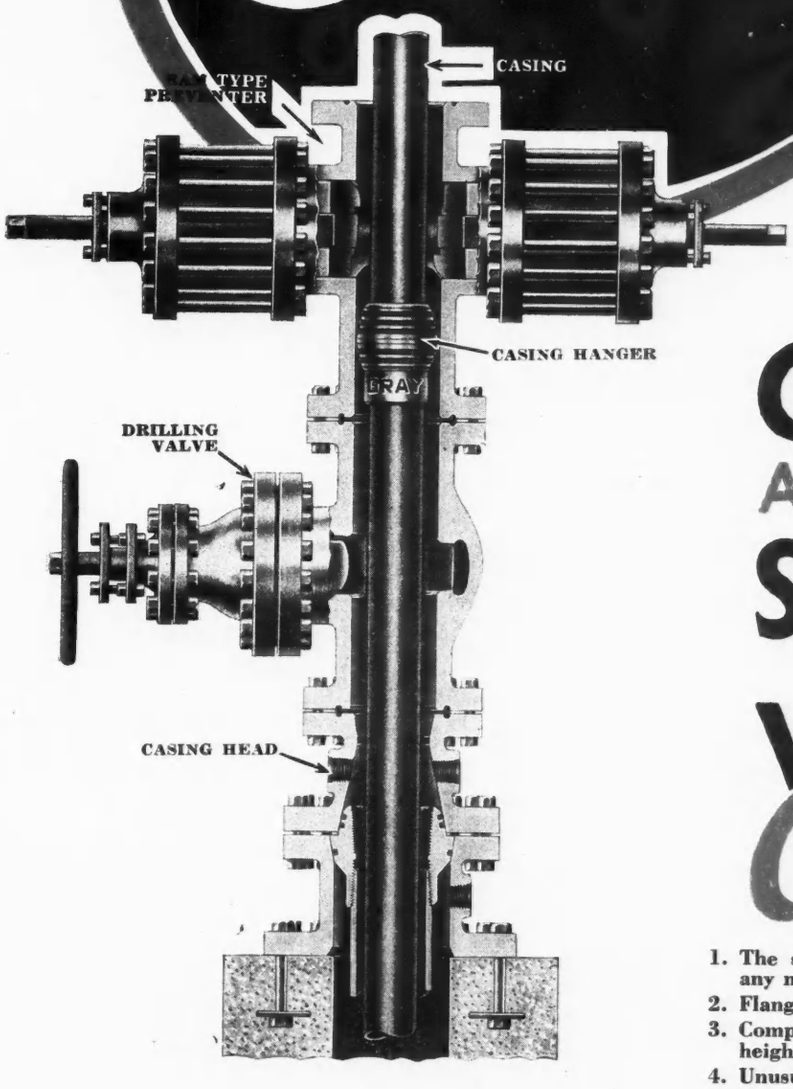
In locating the two-inch gate on the horizontal member of the run, it is necessary to allow sufficient distance between the gate and orifice plate so that the natural flow of the gas stream is not interrupted. This can be calculated for any type run by multiplying the pipe diameter by ten, and adding this to the number of inches between the orifice plate and the downstream pipe tap; or if orifice flange connections are used, the theoretical distance between plate and downstream tap, plus ten times the diameter of the pipe. In the case of two-inch meter run pipe, the distance downstream from the orifice plate to the valve face should not be less than 36 inches.

Input is Measured

Although the flow into input wells is governed by the one-half inch valve, the measurement recorded on the orifice meter allows the operators to compute the gas injected into the sand and to proportion the input accordingly. Having the meter downstream from the pressure control, the pressure indicated upon the chart is the actual input pressure, rather than the field pressure of the system.

The use of a one-half inch control to reduce the lateral pressure is of particular advantage during cold weather operation. Where a larger valve is used as a control, the reduction of pressure through a much thinner opening than that afforded by the use of a smaller valve, increases the chance of freezing within the control manifold. The small valve, being opened wider in proportion to its diameter reduces the orificing effect and allows the pressure-temperature change to take place over a wider area.

3 OPERATING Characteristics



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Markets Unsteady

GENERAL CRUDE ADVANCE FAILS AND GASOLINE WEAKENS

DEVELOPMENTS of the past week indicated that there has been considerable over-estimation of the inherent strength of the markets.

Failure of the Mid-Continent crude price raise by several companies to get an immediate general following tended to wipe out much of the optimism that had been spreading throughout the industry.

Some Factors Unfavorable

Enthusiasm was further dampened, moreover, by the increasing unsteadiness of the gasoline markets.

The outlook was clouded also by various factors in the statistical picture. In fact, the hesitation over higher crude prices and the sagging gasoline market undoubtedly were based in part upon those statistical factors.

Those unfavorable circumstances included: (1) continued heavy crude production, under liberalized state allowables; (2) recent cessation of withdrawals from crude storage and the prospect of additions rather than reductions in the future; (3) continued excessive drilling, which naturally leads to greater difficulty in controlling crude production; (4) greater than seasonal production of gasoline and more than normal building up of gasoline storage.

Hope for Raise Persists

Despite the resistance to the higher crude prices, however, there remained a widespread opinion that a general increase of some extent would materialize soon.

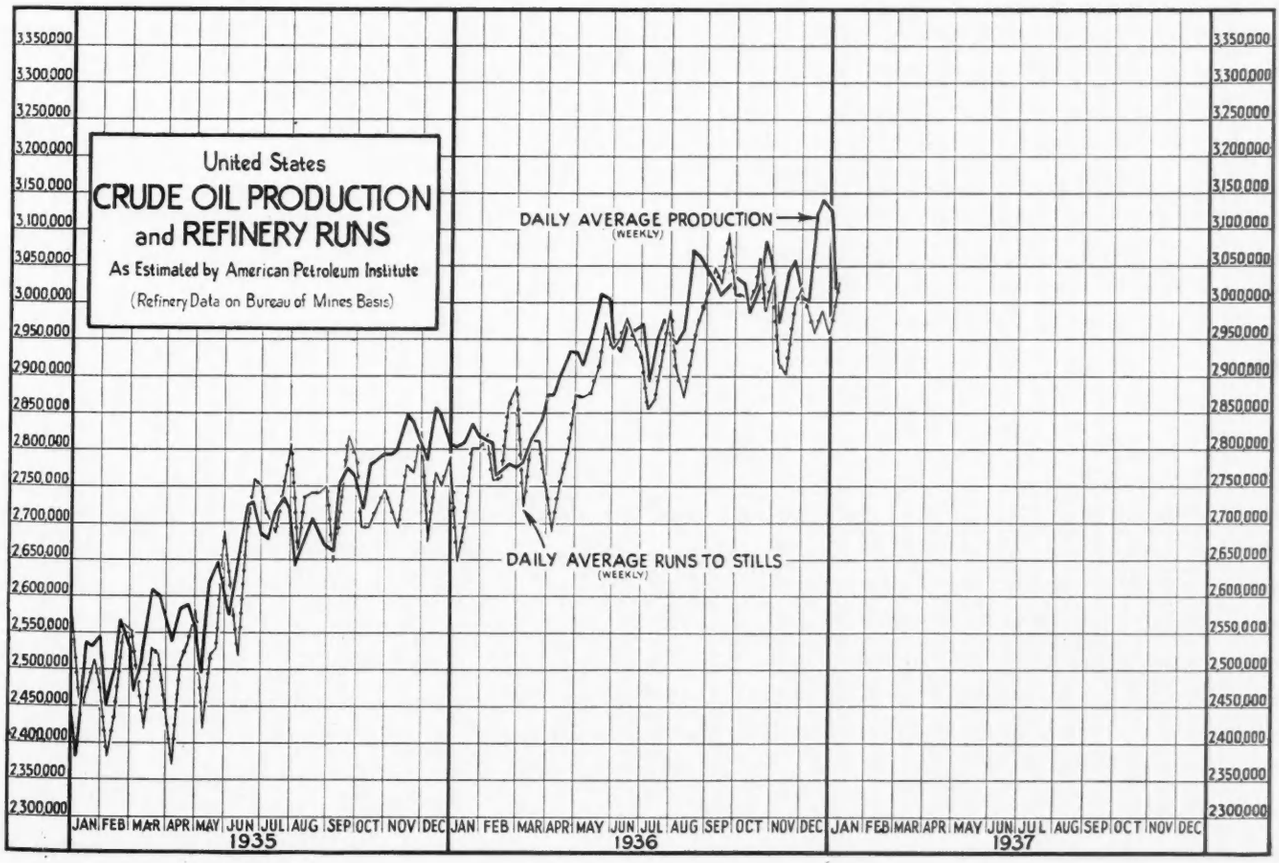
Such an opinion apparently found favor in the securities markets, as the prices of numerous oil company stocks advanced, probably in expectation of higher crude postings.

The conditions that commonly are cited in support of a crude price increase include: (1) the present low level of above-ground storage of oils; (2) the comparatively effective balancing of crude production with consumer demand; (3) the improved markets for most of the refined oils; (4) the prospect that consumption of petroleum will expand further and take up any slack that may occur in controlling crude output and refinery operations; (5) the necessity of raising crude postings to compensate producers for their higher and increasing costs.

The hesitation and debate over the raising of crude prices apparently resulted largely from the weighing of these favorable conditions against the above mentioned unfavorable circumstances.

Continental Raises Prices

The 17-cent increase put into effect January 4 by Continental Oil Company applied in the areas where it purchases, including the Rocky Mountain territory, Oklahoma, Kansas, and North Texas. The company has stated that it purchases about 1,000,000 barrels of crude oil per month. Barnsdall Oil Company, of Tulsa, purchasing about 10,000 barrels daily, also was reported to have begun paying higher prices January 4, in accordance with a pre-



vious announcement that the company would follow Continental's lead.

The new Oklahoma-Kansas schedule adopted by Continental and Barnsdall provided for a top price of $1.35 a barrel for crude oil of 40 gravity and above, and a two cent differential below 40 gravity. The new prices ranged downward to $1.13 for 29-29.9 gravity, and to a bottom price of $1.11 for all grades below 29 gravity.

On all grades the Continental prices were 17 cents higher than the old prices, which continued to prevail generally. The old range was from a top price of $1.18 for 40 gravity and above to a bottom price of 94 cents for oils under 29 gravity.

Just after Continental Oil Company announced on December 4 that it would raise its prices 17 cents a month later, there was also an announcement that the raise would be met by Globe Oil & Refining Company, of Wichita and McPherson, Kansas, which buys about 11,000 barrels daily.

New North Texas Postings

The new top price of Continental Oil Company in North Texas is $1.25 a barrel, compared with the old top price of $1.08. The old North Texas prices were 10 cents a barrel under the old Oklahoma-Kansas prices for all grades.

A large proportion of Continental's purchases are made in Oklahoma, Kansas, and North Texas. In those areas the company has been buying around 30,000 barrels daily, of which about 16,000 barrels daily has been produced by Continental.

Panhandle and Mountain Prices

Purchasing in Carson-Hutchinson Counties, Texas Panhandle, Continental raised its top price to $1.10 a barrel from 93 cents for 40 gravity and above. The 2 cent differential downward made the new bottom price 98 cents for below 35 gravity, compared with 81 cents previously.

Continental also buys in the Rocky Mountain district, and raised postings to 97 cents from 80 cents for Artesia, Jackson, and Maljamar fields, New Mexico; and to $1.45 from $1.28 for Cat Creek, Montana.

For Fort Collins and Wellington, Colorado, Continental posted new prices of $1.06 for below 29 gravity, with 2 cent differential, up to $1.30 for 40 gravity and above. The new price for Canon City and Florence, Colorado, was $1.15. In Wyoming, new prices included $1.23 for Big Muddy and $1.02 for Lance Creek.

Gasoline Market Unsteady

Uncertainty in the crude market apparently was at least partially responsible for the sagging tendency of the gasoline market last week. Prices were lower in some districts of the Mid-Continent, as offerings became more numerous.

On the other hand, fuel oils and kerosene continued to show strength, with colder weather prevailing, and in some instances prices worked higher.

At Oklahoma refineries, U. S. motor gasoline late last week was priced generally at 4¼ cents for the 62 octane and below, 5⅛ to 5⅜ cents for 63 to 67 octane, and 5¾ to 5⅞ cents for the 68 to 70 octane.

Corresponding prices in the Chicago market were: 4⅝ to 4¾ cents, 5 to 5¼ cents, and 5½ to 5¾ cents.

In East Texas, fully tendered third grade gasoline was holding at 4⅝ cents a gallon.

In both the Oklahoma and Chicago markets, kerosene prices ranged from 3¾ to 3⅞ cents a gallon for the 41-43 water white grade and from 3⅞ to 4 cents for the 42-44 water white grade.

At the Oklahoma refineries the No. 1 burning oils were selling at 3⅝ to 3¾ cents and the No. 2 oils at 3⅜ to 3⅝ cents.

Summary of Wells Completed in the United States Week Ending January 9, 1937

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1937	Total Completions this Date, 1936
Alabama	.....	.....	.....	.....	.....	.....	.....
Arkansas	.....	.....	.....	.....	.....	.....	4
California	13	9	.....	4	6,852	32	31
Colorado	1	.....	.....	1	.....	2	.....
Florida	.....	.....	.....	.....	.....	.....	.....
Illinois	.....	.....	.....	.....	.....	.....	.....
Indiana	.....	.....	.....	.....	.....	.....	.....
Kansas	24	17	1	6	23,166	.....	39
Kentucky	20	11	.....	9	337	24	.....
Louisiana	12	8	.....	4	3,575	19	26
Michigan	14	6	1	7	915	43	54
Missippi	.....	.....	.....	.....	.....	.....	.....
Montana	4	4	.....	.....	140	6	6
Nebraska	.....	.....	.....	.....	.....	.....	.....
New Mexico	8	8	.....	.....	15,678	23	11
New York	.....	.....	.....	.....	.....	.....	.....
Ohio	47	11	23	13	243	66	53
Oklahoma	43	33	2	8	49,838	.....	101
Pennsylvania	.....	.....	.....	.....	.....	.....	.....
Texas	240	159	8	73	157,665	453	427
Utah	.....	.....	.....	.....	.....	.....	.....
West Virginia	22	1	20	1	10	24	34
Wyoming	2	1	1	.....	400	6	3
Total this week	450	268	56	126	256,819	765	789
Total last week	418	296	29	93	382,673	.....	.....
Total this year	765	564	85	229	.....	.....	.....

Tax Retention

[*Continued from page 9*]

those taxes which would otherwise be reduced next June. I consider that the revenue from such taxes or its equivalent is necessary for the financing of the budget for 1938."

Included in the budget were estimates of $34,000 for protecting the interests of the United States in oil leases and oil lands, for which a similar sum was provided this year. The Bureau of Mines of the Interior Department is to get $253,000 for oil and gas investigations, against $265,866 this year; $270,860 for mineral-mining investigations, against $250,860, and $12,000 for production of helium gas, against $9179. The Secretary of the Navy is to be given $68,220, an increase of $6220, for operation and conservation of the naval oil reserves.

Submission of the budget, the last formality incident to the opening of the session, paved the way for consideration of the legislative program. Congress was in session for only short periods during its initial week and, while a large number of bills were introduced, as usual, only one applied directly to the subject of oil.

Representative Sanders of Texas reintroduced legislation which was before Congress last year, providing for the doubling of the present oil taxes and imposing a tax of $2 per ton on imported asphalt. The bill also provides for the repeal of the present exemption from tax granted fuel oil for ship supplies.

WEST TEXAS HEARING

Austin.—The Texas Railroad Commission has announced that a hearing will be held at Midland on January 26, at which evidence will be taken upon which to base rules for spacing and other problems in several West Texas fields.

The notice listed Scarborough, Sayre, Keyes, Brown-Altman, Emperor, Halley, Sealey, Keystone, North Ward, Cummings, Goldsmith, Harper, Foster, Johnson, and North and South Cowden.

Comparison of Permits Granted for New Wells

STATE	Week Ending Jan. 9	Total this Mo.	Total this Year	Total this Date Last Year	1936 Year Total
Arkansas	...	...	...	4	103
California	16	35	35	16	1,054
Louisiana	...	...	...	43	1,107
Kansas	31	83	83	47	1,873
Michigan	9	22	22	16	762
Oklahoma	55	107	107	72	2,504
Texas	122	377	377	414	15,582
Total	233	624	624	612	23,075

SLIGHT DECLINE

U. S. daily production 3,095,650 barrels

UNITED STATES crude oil production continued last week close to the high level of the previous week, averaging 3,095,650 barrels daily. That was 3900 barrels a day less than in the previous week but 97,250 barrels a day more than the Bureau of Mines recommendation for average daily production during January.

Fluctuations from the previous week's levels varied among the different states, Texas and California showing increases; Oklahoma, Kansas, and Louisiana, decreases; and New Mexico no change.

Texas output rose to 1,221,800 barrels daily, a gain of 5800 barrels, and was 45,800 barrels above the Bureau of Mines recommendation.

California increased 26,500 barrels to 598,500 barrels daily, and was 38,600 barrels a day above the federal allocation.

Oklahoma last week averaged 560,125 barrels daily, which was 19,775 barrels a day less than in the previous week and 12,975 barrels a day under the federal quota.

Kansas produced on the average 156,225 barrels daily, or 9625 barrels a day less than in the previous week and 9375 barrels a day less than the Bureau of Mines recommendation.

Louisiana averaged 236,800 barrels a day, or 5000 barrels daily less than in the previous week and 20,500 barrels a day more than its allocation.

New Mexico's output remained unchanged at 86,300 barrels daily, which was 6500 barrels a day more than the Bureau of Mines suggestion.

STOCKS INCREASE

East Texas gasoline is gradually piling up

Tyler.—Curtailment of gasoline purchased by majors from East Texas refineries in recent weeks has been followed by a gradual accumulation of surplus stocks of motor fuel. The excess has not reached disturbing proportions, but is contributing towards a weaker price structure. Inclement weather the past week likewise cut down buying. The gasoline market as a whole in this large independent refining center does not reflect a tone that would indicate an early general advance in crude price postings. However, price quotations and demand for kerosene, gas oil and fuel oil occupy a favorable position, and these burning fuels as a group are literally keeping the plants in operation. Kerosene is crowding gasoline as a money product. The former has advanced to four cents per gallon, and is apparently headed for higher levels.

Large stocks held by East Texas Refining Company were recently sold to a major and moved to the Texas coast by pipe line.

Gasoline sold to majors with federal tenders currently ranges from 4½ to 4⅝ cents per gallon. Sales of the same product to jobbers ranged from 4¼ to 4½ cents per gallon. Motor fuel quotations

[*Continued on page 58*]

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in Jan.)	ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING	
		January 9	January 2
TEXAS—			
Texas Panhandle	.....	68,800	63,800
North Texas	.....	64,100	64,200
West Central Texas	.....	33,000	33,100
West Texas	.....	167,600	167,100
East Central Texas	.....	95,700	89,100
*East Texas Field	.....	448,200	446,900
South Texas	.....	171,600	180,300
Texas Gulf Coast	.....	172,800	171,500
*Total Texas	1,176,000	1,221,800	1,216,000
OKLAHOMA—			
Oklahoma City	.....	135,550	137,700
Seminole Area	.....	129,775	134,775
Tatums	.....	3,750	3,475
Lucien	.....	12,750	13,800
Fitts	.....	69,250	77,150
Edmond	.....	15,150	15,650
Others	.....	193,900	197,350
Total Oklahoma	573,100	560,125	579,900
KANSAS—			
Ritz-Canton	.....	6,275	6,300
Voshell	.....	2,800	2,775
Nikkel-Hollow	.....	3,575	3,600
Sedgwick	.....	4,975	4,850
Burrton-Haury	.....	14,025	14,100
Lorraine	.....	4,125	3,325
Oxford	.....	3,200	3,200
Others	.....	117,250	127,700
Total Kansas	165,600	156,225	165,850
LOUISIANA—			
North Louisiana	.....	75,200	81,600
Louisiana Gulf Coast	.....	161,600	160,200
Total Louisiana	216,300	236,800	241,800
ARKANSAS	27,300	27,200	28,100
CALIFORNIA—			
Long Beach	.....	64,500	64,000
Santa Fe Springs	.....	44,500	42,000
Huntington Beach	.....	38,500	36,000
Dominguez	.....	29,000	25,500
Inglewood	.....	13,000	12,000
Ventura Avenue	.....	35,000	35,000
Seal Beach	.....	9,000	9,500
Midway-Sunset	.....	72,500	65,000
Elwood	.....	10,000	10,500
Kettleman Hills	.....	75,500	76,000
Mountain View	.....	21,500	21,000
Playa del Rey	.....	10,000	10,500
Others	.....	175,500	165,000
Total California	559,900	598,500	572,000
MOUNTAIN STATES—			
Wyoming	40,100	44,300	46,200
Montana	14,400	17,500	18,200
Colorado	4,500	3,700	3,700
Total Rocky Mountain States	59,000	65,500	68,100
NEW MEXICO	79,800	86,300	86,300
EASTERN STATES	112,200	115,400	113,800
MICHIGAN	29,200	27,800	27,700
*Total United States	2,998,400	3,095,650	3,099,550
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	.....	8,000	8,000
Grand Total, including surreptitious production	.....	3,103,650	3,107,550

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to January 8, 1937)

DISTRICT	Bottom Grav.	Dif.	Top Grav.	Date
Oklahoma-Kansas	28—$0 94	2¢	40—$1 18	1- 9-36
N. and N.-C. Texas	28— 84	2¢	40— 1 08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Andrews, Crane, Crockett, Ector, Glasscock, Howard, Winkler, Upton	29— .76	2¢	36— .90	1-14-36
Pecos	* .85			1-14-36
West Central Texas	28— .84	2¢	40— 1 08	1- 9-36
East Central Texas	28— .91	2¢	40— 1 15	1- 9-36
East Texas	*1.15			1- 9-36
Talco	* .65			11-1-36
Rodessa	*1.10			1- 9-36
Texas Gulf Coast				
Anahuac - Dickinson, Flour Bluff, Turtle Bay	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1 34	1- 9-36
Tomball, Satsuma	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull, Liberty, Orange, Pierce Junction, Barbers Hill, Raccoon Bend, Sugarland, West Columbia, Thompsons, Mykawa, Amelia, Plymouth, Quintana-O'Connor, North Quintana	Below 17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	* .95			11- 1-36
Greta (Heavy)	* .95			11- 1-36
Saxet (Light)	*1.22			10- 1-36
Saxet (Heavy)	* .95			11- 1-36
Taft (Heavy)	* .95			11- 1-36
Mirando	* .90			11- 1-36
Pettus	*1.25			1- 9-36
Salt Flat	* .97			1-14-36
Darst Creek	* .97			1-14-36
Placedo (Heavy)	* .90			11- 1-36
Placedo (Light)	* .95			4- -36
Port Lavaca	* .97			
Heyser (Light)	*1.15			11-1-36
Heyser (Heavy)	* .90			11-1-36

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Bottom Grav.	Dif.	Top Grav.	Date
Arkansas				
El Dorado (Light) and Rainbow	25—$0 78	2¢	40—$1.10	1-10-36
El Dorado East Field and Smackover	* .75			1-10-36
North Louisiana	25— 78	2¢	40— 1.10	1-10-36
Urania	* .97			1-10-36
South Louisiana	Below			
Lockport	19— 92	2¢	34— 1.22	1- 9-36
Iowa Cameron Mds.	19— 82	2¢	34— 1.12	1- 9-36
Lafitte	*1 12			11- 1-36
Rocky Mountain States				
Salt Creek	29— 94	2¢	40— 1 18	1-10-36
Elk Basin	*1.18			7-20-36
Frannie (Light)	* 70			11- 4-36
Frannie (Heavy)	* 62			11- 4-36
Grass Crk., Wyo., (Light)	*1 18			7-20-36
Grass Creek (Heavy)	* .62			11- 4-36
Hamilton Dome	* .57			11- 4-36
Big Muddy	*1 11			1- 9-36
Rock Creek, Wyo	*1.08½			11- 1-36
Sunburst	*1.15			6- 5-36
Lance Creek	* .90			1- 9-36
Osage	*1.08			
Cat Creek	*1.07			8-25-33
Cut Bank	*1 35			6- 3-36
Pondera	*1 05			9-29-33
Hog Back, N. M	*1.00			9- 8-33
Lea County, N. M	29— .76	2¢	36— .90	1-14-36
Mid-West States				
Lima	*1 15			9-18-36
Illinois	*1.23			1- 9-36
Princeton	*1 23			1- 9-36
Western Kentucky	*1.28			11-1-36
Pennsylvania				
Bradford	*2.57			12-28-36
Sw. Pa. Pipe Line	*2.32			12-28-36
Eureka Pipe Line	*2.27			12-28-36
Buckeye Pipe Line	*2 12			12-28-36
Corning Grade	*1 32			9-18-36
Michigan				
Central Michigan	*1 32			9-16-36
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2 10			9- 9-33
Oil Springs	*2.17			9- 9-33
Mexico				
F.O.B. Tampico (Net)	‡0.96			

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.
‡ U. S. Currency, buyer pays tax.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 12	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut *4
September 6, 1935	Up 5	.....	.....
October 29, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up *38
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up *9
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....
February 26, 1936	.....	.....	Up 15
December 28, 1936	Up 12	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

TEXAS—2¾ cents or 2¾ percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅜ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

* All gravities—flat rate.
* Signal Hill 26 gravity.
‡ Seal Beach 26 gravity.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field. Effective February 26, 1936)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans	Elwood Terrace	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs	New Hall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Buena Vista Hills Elk Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$.80	$.79	$.78	$ 79	$.80	$.76	....	....	$.80	$.76	$.76	$.77	$.78	.....	$.70	....	$.70	$.70	$.70	....
15-15.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
16-16.9	.80	.79	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
17-17.9	.80	.79	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
18-18.9	.80	.79	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
19-19.9	.82	.79	.82	.87	.84	81	....	....	.85	.76	.78	.77	.78	.....	.70	$.70	.74	.74	.71	$.70
20-20.9	.85	.79	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	.....	.....	.70	.78	.78	.72	.70
21-21.9	.88	.79	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	$.78	.....	.73	.82	.82	.74	.70
22-22.9	.92	.82	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	.....	.77	.87	.86	.78	.72
23-23.9	.95	.86	.96	.99	1.02	.96	$.84	....	.96	.88	.93	.82	.92	.78	.....	.80	.92	.90	.82	.76
24-24.9	.99	.91	1.00	1.02	1.06	99	.88	....	.99	.91	.96	.85	.96	.82	.....	.84	.97	.94	.86	.79
25-25.9	1.03	95	1.03	1.05	1.11	1 03	.93	....	1.02	.95	....	.89	.99	.86	.....	.88	1.01	.98	.90	.83
26-26.9	1.06	1.00	1 07	1 09	1.16	1 06	.98	....	1.05	.98	....	.92	1 03	.90	.....	.91	1.06	1 02	....	....
27-27.9	1.10	1.05	1.11	1.12	....	1 10	1.03	....	....	1.02	....	.96	1.06	.95	.....	.95	1.10	1.06	....	....
28-28.9	1.14	1.10	1.14	1.15	....	1.14	1.07	....	....	1.06	....	.99	1.10	.99	.....	.99	1.15	1.10	....	....
29-29.9	1.17	1.15	1.18	1.18	‡F.O.B.	1.17	1.12	....	....	1.09	....	1.03	1.14	1.03	.....	1.02	1.20	1.14	....	....
30-30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	F.O.B.	....	....	....	1.07	1.17	1.08	.....	1.06	1.25	1.18	....	....
31-31.9	....	.....	....	1.24	Line	1.24	1.22	Ship	Kettleman Hills			1.11	1 21	1 12	.....	1.09	1.29	....	....	....
32-32.9	....	....	....	1.27	....	1.27	1.27	....				1.14	1.25	1 16	.....	1.13	1.34	....	....	....
33-33.9	....	....	....	....	....	....	1.32	$.128		1.19		1.18	1.28	1.20	.....	1.17	1.38	....	....	....
34-34.9	....	....	....	....	....	....	1.37	1.32	....	1.23	....	1.22	1.32	1 25	.....	1.20	.....	....	....	....
35-35.9	....	....	....	....	....	....	1 42	1.35	....	1.27	....	1 25	....	1 29	.....	....	.....	....	....	....
36-36.9	....	....	....	....	....	....	1.46	1.39	....	1.31	....	1 29	....	1 33	.....	....	.....	....	....	....
37-37.9	....	....	....	....	....	....	1.51	1.43	....	1.35	....	1 32	....	1 37	.....	....	.....	....	....	....
38-38.9	....	....	....	....	....	....	1.56	....	....	1 39	....	1 36	....	1.42	.....	....	.....	....	....	....
39-39.9	....	....	....	....	....	....	1.61	....	....	1.43	....	1 40	....	.....	.....	....	.....	....	....	....
40-40.9	....	....	....	....	....	....	1.66	....	....	....	....	1.43	....	.....	.....	....	.....	....	....	....

WORLD DEVELOPMENTS and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Jersey Withdraws

Y. P. F. PAYS 42 MILLION FOR ARGENTINE PROPERTIES

Another big step toward nationalization of the oil industry in Argentina was taken the last day of 1936 when Yacimientos Petroliferos Fiscales, the government controlled, integrated oil company, agreed to pay Standard Oil Company of New Jersey about 140 million pesos ($42,000,000) for properties of the latter in the Argentine. F. C. Schultz of the Standard, and Ricardo Silveyra, head of the Y. P. F., represented the principals in the negotiations.

The exact consideration, which will be near the $42,000,000 figure, will be determined by a committee representing both sides.

According to reports, the purchase price as tentatively fixed reflects an allowance of about $28,000,000 for payment for Standard's wells and general field and retailing equipment and buildings and an allowance of about $14,000,000 for the company's oil stocks.

The deal removes from the Republic of Argentina the largest private foreign operator in the nation, as Standard of New Jersey agreed to withdraw from the market there.

Students of foreign affairs feel Standard Oil Company of New Jersey's step in withdrawing from the Argentine may set a precedent for other foreign enterprises operating in Argentina. As outlined in issues of THE OIL WEEKLY published since mid-1936, the trend toward nationalization in the southern republic has been very pronounced, not only with reference to the oil industry, but with respect to other industries also.

Government rulings issued in 1936 endowed Yacimientos Petroliferos Fiscales with powers which gave it virtual control of retail and import trade in petroleum products in the Buenos Aires district, which represents 90 percent of the Argentine oil business. The control was not to become effective immediately, but the trend could result in nothing less by 1942, if private enterprise obeyed the law.

Vice presidents of Standard Oil Company of New Jersey and Royal Dutch Shell interests rushed to Buenos Aires in late summer in an attempt to effect a ruling from the government that would allow Y. P. F. to increase its prestige and business in some manner that would not be wholly at the expense of private enterprise.

It has been pointed out that Jersey's withdrawal may be indicative of some of industry's opinion as to the future for private enterprise in the Argentine.

Putting down the line to Zistersdorff field in Austria. Motorcycles are the "utility" means of transportation here.

Giant Concession

[*Continued from page 9*]

government to attempt to interest outside capital in development of Afghanistan's potential oil areas, it is said.

Lovejoy is quoted in New York press as stating that surveys made of the concession pointed to the presence of oil but that it was impossible to make a forecast as to the quantity that might be found. Numerous oil seepages in Afghanistan are a matter of record.

Rumored, but unconfirmed, conditions of the concession call for Inland Exploration Company to build up a production of 40 million barrels after 10 years of development work; stipulate that the company granted the concession must be wholly American.

The concession runs for better than 500 miles across the northern part of Afghanistan from Persia to India. It extends south to the southern border of the country.

In the event of development of commercial production, a pipe line approximately 1000 miles in length would be required, regardless of the route taken out of the interior.

The above statements were described as "substantially correct" in a telegram received by The Oil Weekly January 7 from Lovejoy.

A statement issued by him to the Associated Press contained the following information:

"This is a concession for exploration as well as for exploitation. This territory has never been fully studied. A few geologists have taken bird's eye views of part of it and think it contains oil. But no oil testings have ever been made. If the agreement goes through it will take years to lay out the territory and test for oil."

Inland Exploration Company was formed two years ago for the express

purpose of negotiating for the Afghanistan concession. The Texas Corporation holds a 30 percent interest in Seaboard Oil Company, parent organization of the Inland. Ogden L. Mills, former secretary of the United States treasury, Fisher Brothers of Detroit, and Case, Pomeroy & Company are financially interested in the concession, according to Lovejoy.

Tentative acquisition of the concession by Inland Exploration Company is said to constitute a very definite disappointment to certain major oil interests of England, which are understood to have been cognizant of the potential value of the concession. Whether these interests tried to block negotiations carried on in Kabul, Geneva and Berlin in recent months was not announced by Seaboard interests or by Faiz Mohammed Khan, Afghanistan minister of foreign affairs who represented his government in the transactions. Dr. Barnum Brown of the American Museum of Natural History is quoted as saying, however, that British geologists who had surveyed parts of the territory involved in the concession were secretive concerning their findings.

Germany's Weakness

LIMITED LOCAL RESERVES CALL FOR SYNTHETIC PRODUCTION

By CHARLES WILL WRIGHT[1]

(Continued from January 4 issue)

Dr. H. Hirz of Halle, at a convention in Berlin in April, 1936, stated: "In 1934 some 70 percent and in 1935, 65 percent of the total motive fuel requirements had to be covered by imports. The national program to exploit domestic sources of raw material and to throttle foreign motive fuel imports which started two years ago has made much progress in 1935. The high pressure hydrogenating plant at Leuna was extended from a 230,000 tons to a 350,000 tons capacity. The high pressure hydrogenating plant of the Braunkohlen-Benzin A.G. (Lignite Benzine Company) at Bohlen commenced work on a 170,000 ton capacity plant. The Magdeburg plant, also for a 170,000 ton capacity by the same method, is still under construction. The Bohlen and Magdeburg plants employ lignite tar as a base. The 400,000 tons of tar required are gained in newly-constructed distilleries.

The Ruhland plant, working according to the Fischer-Tropsch method, will, if it fulfills expectations, be extended from a capacity of 50,000 tons to one of 150,000 tons. The synthetic gas of the Ruhland plant is produced from lignite briquettes.

Further, in the Scholven Mine in Westphalia, a high pressure hydrogenating plant is being built for an annual production of 125,000 tons. A plant working according to the Fischer-Tropsch procedure was started at the Victoria Mine at Rauxel, with a producing capacity of 125,000 tons. At the Rheinpreussen Mine, at Homburg, and the Ruhr Chemical Works, Holten, plants of similar capacity are nearing completion. The output capacity of all these plants, both under construction and completed, totals some 940,000 tons. Taking 1935 domestic crude oil production figures as a basis together with the output of synthetic gasoline and benzol, it may be reckoned with that in 1937 domestic sources will cover 83 percent of the 1935 requirements."

[1] Foreign Mineral Specialist, U. S. Bureau of Mines, attached to the consulate general at Berlin, Germany.

Estimated Production of Several Derivatives from Coal in 1934 and 1935

(In Metric Tons)

	1934	1935
Gasoline	16,000	24,000
Gas (Diesel) oil	5,400	6,300
Fuel oil	137,600	159,700
Other oils	219,000	254,600
Total	378,000	444,600

The total output and consumption of oil products from all sources in Germany according to the individual products during the last few years was as follows, in 1000 tons:

Domestic Production

	1933	1934	1935
Crude oil	239	329	430
Gasoline	174	256	363
Kerosene	21	29	46
Gas and fuel oil	130	296	362
Lubricating oil	80	79	86
Total	644	988	1257

Domestic Consumption

	1933	1934	1935
Crude oil	520	597	945
Gasoline	1179	1414	1587
Kerosene	118	127	121
Gas and fuel oil	908	1258	1571
Lubricating oil	356	394	524
Total	3081	3790	4748
Percentage supplied from domestic sources	20.9	26.6	26.5

Imports of oil products for the years 1913 and 1932 to 1936 (first 8 months) were as follows, (figures in 1000 tons):

	1913	1932	1933	1934	1935	8 Mo. 1936
Crude oil	1	270	281	277	515	338
Gasoline	159	1088	1005	1158	1284	853
Kerosene	745	104	97	98	75	38
Gas oil	48	393	467	640	883	668
Fuel oil	248	313	276	322	326	210
Lubricating oil	81	198	311	316	438	239
Residue oils	..	..	..	349	372	219
Total	1282	2366	2437	3160	3832	2565

For the complete picture as regards the total domestic production of light fuel because of the obligatory addition of 10 percent of alcohol to all gasoline sold, the following table has been added:

	(In Tons) 1935	1934
Gasoline from domestic crude oil	97,500	71,000
Gasoline from lignite	241,900	169,400
Gasoline from coal	24,000	16,000
Total	363,400	256,400
Benzol mixed with gasoline for motor fuel	280,000	270,000
Potato alcohol mixed with gasoline	58,650	.....
Chemical alcohol	111,350	156,000
Total production of light fuels	813,300	682,400

As to consumption, the 18 percent increase in consumption of mineral oils, substitutes derived from coal, and motor alcohol in 1935 over that of 1934 is noteworthy and due to greater use of Diesel engines and motor transport.

Of interest are also the figures of per capita consumption which in 1934 were as follows: Germany 40 liters, France 85 liters, England 144 liters, and the United States 609 liters.

U. S. Loses Business

The sources from which Germany obtains its mineral oils have altered materially during the past 10 years, but particularly during 1934 and 1935, when the trend away from the United States and towards certain countries, particularly Russia, Peru and other countries in South America, has been very marked as a result of the import restrictions and clearing agreements that have developed in Germany during recent years. The share of the United States in this trade dropped from 62 percent of German imports of all mineral oil products in 1924 to about 13.7 percent in 1934.

Mineral Oil Imports from Clearing Countries

(In 1000 Metric Tons)

	1934	1935	Increase * Decrease—
Rumania	255	687	*432
Other America[2]	1261	1321	* 60
Russia	396	404	* 8
France	3	21	* 18
Dutch East Indies	28	43	* 15
Great Britain	40	138	* 98
Total	1983	2614	*631

[2] Note—The term "Other America" employed in German foreign trade statistics includes Dutch and French colonial possessions in northern South America and the West Indies, where the large refining plants on the Dutch islands of Aruba and Curacao are the principal sources of imports.

Mineral Oil Imports from Non-Clearing Countries

(In 1000 Metric Tons)

	1934	1935	Increase * Decrease—
United States	433	667[3]	*234
Peru	178	81	— 97
Iran	233	53	—180
Mexico	271	322	* 51
Venezuela	26	22	— 4
Total	1141	1145	* 4

[3] Includes 178,000 tons refined and re-exported.

Extend Tussey

OUTPOST TEST SWABS 132 BARRELS IN 24 HOURS

WEEKLY STAFF REPORT

Ardmore.—Southern Oklahoma was quiet last week, chief item of interest being the extension of the North Tussy pool, the most prolific producing area in the southern part of the state today.

Winkler & McQueen's Perkins 1, NWc SE 32-1n-3w, extended the North Tussy pool to the north when it came into production from the Tatums sand. In the formation with tubing set at 2108 to 2291 feet, the well swabbed 132 barrels of oil in 24 hours, and has been completed. Operators immediately skidded the rig to location for Perkins 2, NE NW SE 32-1n-3w, which will be an east offset to the new producer.

Wrightsmith Oil Company's Yates 1, SW NW SW 33-1n-3w, was coring at 2688 feet earlier in the week. The well was drilling in solid sand at 2560 feet, and cored broken sands from 2582 to 2597 feet, in lime from 2597 to 2665, and in broken sand again from 2655 to 2688 feet. Later in the week, operators plugged back to 2600 feet, ran eight-inch casing to 2443 feet, and were waiting on cement.

Skelly Oil Company's Gross 1, SE NE SW 32-1n-3w, had a slight show of oil in tight sand at 2220 feet and was drilling ahead.

Tillman Test Drilling

Indian Territory Illuminating Oil Company and Foster Minerals Corporation's Hatler 1, C SW NE 32-2s-17w, south of Frederick in Tillman County, topped the Simpson Dense lime at 4549 feet, and was drilling ahead below 5017 feet in the Siliecous lime, topped at 4940 feet. Operators report the well may be plugged back to upper showings in an attempt to make a well of it.

Sinclair Prairie Oil Company's Stockton 1, SEc SW 26-6s-2w, in the Oswalt area of Love County, was given a casing shot from 6535 to 6550 feet, and swabbed 27½ barrels of oil. The shot was reported to have materially aided the flow of the well.

Magnolia Petroleum Corporation's Gardner 1, C NE NE NW 34-6s-2e, in the Marietta area, made about six feet during the last 24-hour drilling period, January 6. The well was drilling at 2796 feet, with the hole in bad condition following a recent shot.

Carter Oil Company's Wade 38, NW NE NW 6-4s-4w, in the old Healdton pool of Carter County, drilled to 1172 feet and flowed an estimated 40 barrels of oil.

Expect Let Down

DECLINE IS ANTICIPATED IN DRILLING ACTIVITY

Oklahoma City.—With oil men looking for a let-down in drilling activity in and around the Edmond field, and with the advent of poor weather conditions throughout the state, a slump in operations is presaged for this sector of the Sooner state. Farther north, two good producers were in the process of completion.

Mid-Continent Petroleum Corporation's Campbell 5, NE SW NE 33-17n-4w, in the Crescent pool of Logan County, a new producer, was given a 24-hour potential of 5260 barrels of oil and had 6,000,000 cubic feet of gas. Production was coming from the second Wilcox sand at 6279 feet.

Lucien Completion

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Pfeiffer 5, SW SE SW 30-19n-2w, in the Logan County portion of the Lucien pool, flowed 253 barrels of oil in 24 hours from the pay sand. The well topped the second Wilcox sand at 4935 feet and drilled to 4981 feet, where it produced 659 barrels of oil in a later 24-hour period.

Carter Oil Company's Herran 4, SWc NE 28-17n-4w, topped the soft zone of the second Wilcox sand at 6265 feet, and drilled ahead to 6273 feet. The well was shut down to set pipe at 6220 feet.

Sinclair Prairie Oil Company's Fant-Meyers 1, SE NW NW 27-10n-2w, in the Moore pool of Cleveland County, established a potential of 6814 barrels of oil for a 24-hour test, but operators were of the opinion that the hole had bridged, and tools were being rigged up to clean out the obstruction. Production was coming from the Wilcox sand at 7316 feet. It flowed 9,000,000 cubic feet of gas before bridging over.

Many oil men were beginning to look for a let-down in activity in the Edmond pool of Oklahoma County, as drilling wells in the area neared the completion stage and no new locations have been staked lately. Pure Oil Company's Malm 11, SWc 30-14n-3w, at the northwest edge of the field, flowed 519 barrels of oil while cleaning out following a shot at around 6680 feet in the top of the Wilcox sand. When deepened from 6680 to 6690 feet, the well flowed 480 barrels of oil during a 14-hour gauge, and had 10,000,000 cubic feet of gas. Operators report further tests are to be made.

The Texas Company's State 1, SEc NE 36-14n-4w, on the west edge of the field, drilled to a total depth of 6660 feet, from which depth fluid was reported rising in the hole. Operators bailed in but found a hole full of water.

Pure Oil Company's Berquist 2, NW SW SE 30-14n-3w, topped the second Wilcox sand at 6713 feet, and at a total depth of 6734 feet, had a show of salt water. Operators plugged the hole back, and decided to use it as a salt water disposal well. It will not be whipstocked.

Transwestern Oil Company's Meeker 1, NW NE NW 29-13n-3w, in the Britton area of northern Oklahoma County, is a new test. It is due east of the community pool in which there are now nine producing wells and no failures. Two producers are just north of the pool. This will be the second drilling test outside the community area.

FITTS ACTIVE

Many new completions made in district

Tulsa. — Routine drilling reports formed the bulk of the news from this district last week as cold weather bore down on the state to hinder operations in the field. The Fitts field of Pontotoc County continued its usual showing of good production, and several other sectors reported moderately good completions.

In the Fitts field, three upper Simpson sand completions were given 24-hour potentials. Blackstock Oil Company's Lewis 2, SEc 19-2n-7e, made 245 barrels of oil. Continental Oil Company's Bates 1, NW NE SE 27-2n-7e, made 219 barrels of oil, and Mid-Continent Petroleum Corporation's McKoy 4, SW SE SW 20-2n-7e, made 1668 barrels of oil.

New Wells Completing

E. H. Moore's Waite 1-A, NWc 8-2n-7e, on the boundary line of the field, drilled to 441 feet in the Hunton lime. The cuttings showed an oil stain and the well was flowing about two bailers of water an hour. The crew was plugging back to 420 feet to test.

Skelly Oil Company's Metropolitan Life Insurance Company 5, SW NE SW 23-2n-7e, was producing from the Sylvan shale at 4004 feet. Operators set seven-inch casing at 3611 feet and ran 2½-inch tubing to 4004 feet. When the tubing was raised 10 joints, the well

flowed through casing, choked in to 183 barrels of oil in 1½ hours.

The same company's Park College 17, SE SW NE 28-2n-7e, had an estimated flow of 200 barrels of oil through casing into pits the first hour, and flowed 197 barrels the second hour through tubing. It was shut in to take potential.

Magnolia Petroleum Corporation's Metropolitan Life Insurance Company 29, SE NW SW 22-2n-7e, topped Hunton lime at 3510 feet, and drilled to 3514 feet where it was acidized with 10,000 gallons. Following acid treatment the well flowed 49 barrels of oil in one hour through casing. Potential was to be taken.

Stahl Petroleum Corporation's Dennis 8, NW SW SW 21-2n-7e, topped Hunton lime at 3615 feet; topped the Viola lime at 4060 feet, and after drilling to 4370 feet, was acidized with 2500 gallons, then reacidized with 12,500 gallons, following which it flowed 200 barrels of oil in one hour through casing. Potential was to be taken at an early date.

Take Potential Gauges

Sinclair Prairie Oil Company's Wooley 9-B, SW SE SW 22-2n-7e, received a potential of 4721 barrels of oil. Top of the Hunton lime was found at 3476 feet, and the well flowed 822 barrels of oil in four hours. It was then drilled ahead to 3580 feet and flowed 592 barrels of oil in three hours.

Carter Oil Company's Harden 12, SEc SW 30-2n-7e, was given a potential of 2276 barrels of oil. No gauge was made of the gas. Production was from the McLish sand at 4337 feet.

E. H. Moore, Inc., Burris 3, NW NE SE 22-2n-7e, stopped at 4032 feet and received a rating of 4185 barrels of oil a day, along with 5,130,000 cubic feet of gas. Sinclair Prairie Oil Company's Moody 1-A, NEc SE 22-2n-7e, was rated good for 3382 barrels of oil daily with 2,500,000 cubic feet of gas after drilling to 3777 feet in the Hunton lime. The same company's Wooly 8, SE SW SW 22-2n-7e, made a potential of 3965 barrels of oil.

Skelly Oil Company's Ingram 1, NWc SW 23-2n-7e, found highly saturated lime from 3710 to 3810 feet, and was drilling ahead below 3925 feet with no gas showing.

Magnolia Petroleum Corporation's Burris 10-B, SEc NE 28-2n-7e, was given a potential of 3541 barrels of oil and 4,000,000 cubic feet of gas. The well flowed an estimated 4,000,000 cubic feet of gas which blew out the hole. Bottom hole pressure was gauged at 1485 pounds. The same company's Metropolitan Life Insurance Company 27, NE NW NE 27-2n-7e, flowed 591 barrels of oil through casing in one hour and was shut in to take potential.

Minnehoma Oil & Gas Company's Masters 1, NW NE SW 23-2n-7e, was completed as the largest Hunton lime producer in the Fitts field, making a 24-hour potential of 6276 barrels of oil through 2½-inch tubing. The well produced from 4075 feet in the Hunton lime.

Carter Oil Company's Richards 12, NE SE SE 30-2n-7e, which flowed 504 barrels of oil the first hour and 407 barrels the following 30 minutes through casing, was preparing to take potential. Total depth was 4337 feet.

Continental Oil Company's McCarty 4, SW NW NW 12-1n-7e, is the latest producer in the Jesse pool of Pontotoc County. The well flowed 130 barrels of oil in six hours from 4754 feet. Operators were acidizing at last reports.

New Jesse Completion

The same company's Thompson 1, SW NW SE 2-1n-7e, deepened from 4523 to 4531 feet, and flowed 900 barrels of oil in four hours through casing and had 5,000,000 cubic feet of gas. The well later flowed 700 barrels of oil in five hours while the crew was running tubing. Potential was to be taken with the tubing in the hole.

Continental Oil Company's King 1, NE SW NE 26-1n-8e, in the Clarita area of Coal County, topped the Wilcox sand at 5743 feet and was circulating and lowering liner. The well made one flow estimated at around 30 barrels of oil.

Carter Oil Company's Warne 1, NEc NW 31-3n-9e, north of Centrahoma in the same county, bailed to 5560 feet but had no show. Operators later cored to 5571 feet in a sandy lime which was dry. It is at a total depth of 5602 feet.

Carter Oil Company's Diamond 1, CW½ SW NE 26-11n-6e, in the Pottawatomie County sector of the Keokuk pool, swabbed 30 barrels of oil and 50 barrels of salt water. The company completed its Aldridge 6, NEc NW 35-11n-6e, on the Seminole County side of the pool, for 125 barrels of oil.

Atlantic Refining Company et al's Thomas 2, NEc NW SE 8-6n-7e, in the Wofford pool, west of Sasakwa, had the Wilcox sand from 3952 to 3959 feet, and was reported flowing 40 barrels of oil per hour.

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Pryor 1, NW NE NW 36-10n-7e, north of Bethel, came into production averaging 150 barrels of oil per hour on an eight-hour test. Production was from the shallow Cromwell sand at 3442 feet. It is an offset to the Yahola 1, recently completed by the two companies in the area.

H. F. Wilcox Oil & Gas Company's Sac and Fox 4, NEc SW 15-14n-6e, south of Stroud in Lincoln County, was making about 35 barrels of oil and 2,000,000 cubic feet of gas from a total depth of 2988 feet. It is reported another test may be started soon.

Summit Drilling Company's Eakers 1, NEc SW 35-15n-2e, northwest of the Hoyt pool, had the Wilcox sand at around 5129 feet, and cored from 5144 to 5149 feet, getting a stain of oil. A drill stem test showed 200 feet of light oil and about 100 feet of rotary mud in 19 minutes. Operators have started running seven-inch casing, and will cement at around 5110 feet. The new well will extend the Hoyt field about one-half mile.

Barnsdall Oil Company's No. 13, NW SW SW SW 17-23n-12e, in the Avant area of Osage County, topped the Bartlesville sand at 1601 feet, and based the sand at 1650 feet. The well was shot with 30 quarts between 1620 and 1650 feet, and was being completed. No gauge had been taken at last reports.

Hughes County Active

Davon Oil Company's Westby 1, CS½ SE NW 5-8n-10e, in the North Yeager pool of Hughes County, drilled from 3078 to 3120 feet in Cromwell sand and flowed 4,000,000 to 5,000,000 cubic feet of gas. The well was drilling ahead at 3135 feet in shale, and was looking for the second Cromwell sand.

J. A. Chapman's Festess Williams 2, NW SW NW 30-10n-9e, in the Olympic pool of Hughes County, had the Senora sand from 1716 to 1769 feet, and after a shot, produced 834 barrels of oil, making it one of the largest producers in the area. His Kitty Williams 2, NE SE SW 25-10n-8e, had the sand from 1738 to 1761 feet and when shot, made 340 barrels of oil initial. Kitty Williams 3, SW SE SW 25-10n-8e, had the sand from 1727 to 1742 feet, and was cleaning out after being shot. E. B. McFarlin's Yargrough 1, SW SE NW 18-10n-9e, made 170 barrels of oil from between 1879 and 1924 feet; No. 2, NW SE NW 18-10n-9e, is a 400-barrel well from between 1866 and 1902 feet.

Mid-Continent Petroleum Corporation's No. 1, SW SE SE 24-12n-8e, in the Boley area of Okfuskee County, topped the Hunton lime at 3399 feet, and drilled to 4035 feet. The well then flowed 8,000,000 cubic feet of gas and was shut in for a gas well.

Stanolind Oil & Gas Company's Ollie Bunner 1, SEc NE 25-10n-8e, in the north Olympic pool, flowed 838 barrels of oil in 20 hours from the Senora sand at 1795 feet.

Robinson Oil Corporation's McKee 6, NWc SW 17-13n-16e, south of Boynton in Muskogee County, was one foot in a sand at 2098 feet, from which

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO COUNTY—		
Duke et al, Wooten 1, se se se 33-6n-9w ¶1-3/5		2461
CREEK COUNTY—		
Vierson et al, Cooper 3, cwl nw ne 20-17n-10e	*	2152
GARVIN COUNTY—		
S. W. Horton, Morton 1, se nw ne 31-1n-1w	*	154
GRADY COUNTY—		
Holt et al, Ramsey 1, ne se ne 31-5n-8w	lcn.	abd.
HUGHES COUNTY—		
Suppies, Turguson 1, ne se sw 9-6n-8e (pb 2650)	12	2745
KIOWA COUNTY—		
Nagle & Adams, Oster 1, sw ne sw 27-7n-17w ¶½		930
LOGAN COUNTY—		
Carter & Gulf, Miller 3, se nw se 28-17n-4w ¶27½	7183	6313
MARSHALL COUNTY—		
Neff & Godfrey, Taliaferro 1, nw se sw 26-5s-5e	*	449
NOBLE COUNTY—		
Glen Dial Inc, Long 1, cse nw 28-20n-2w	40	5119
Phillips & Shell, Hackett 1, nw ne se 21-23n-2w ¶4	2252	4335
OKFUSKEE COUNTY—		
Chapman, Williams 2, ne se sw 25-10n-8e	472	1769
Manahan, Black 4, nw ne se 25-10n-8e	680	1838
Chapman et al, Yarbraugh 1, sw se ne 18-10n-9e	157	1924
Amerada-Stanolind, Carolina 4, nw se sw 31-10n-9e	*	1812
OKLAHOMA COUNTY—		
Ohio Oil, Hathaway 3, nw se nw 6-13n-3w ¶5	3814	6730
Slick-Urschel et al, Chestnut 1 sw nw sw 20-13n-3w ¶3	2189	6760
Continental Oil, Young 14, nw nw nw 31-14n-3w ¶11¾	7237	6699
Ohio Oil, McMillian 1, ne nw sw 31-14n-3w ¶1½	1878	6685

depth the well made several flows. The crew was having trouble with a caving hole, and attempts were being made to clean out so the well would flow.

New Work Off

Operations in Oklahoma are showing the expected pre-winter decline as indicated by reports received during the past week. Scouts report 53 new starts, with Pontotoc County leading with 13, followed by Okfuskee County with 12. Six reports were received from Oklahoma County, 4 from Stephens County, and 3 each from Noble and Osage counties. Kiowa, Lincoln and Seminole counties made 2 reports each and Carter, Creek, Logan and Pawnee counties had 1 new location each.

Operators completed 44 wells during the week, 33 being oil producers with a total initial production of 49,838 barrels daily. Two gas wells were completed for an openflow of 2,100,000 cubic feet. One location was abandoned and 8 were failures.

CHAS. B. JOHNSON, JR., formerly petroleum engineer with Barnsdall Oil Company at Oklahoma City, has been transferred to the Gulf Coast as district engineer. He and Mrs. Johnson will reside at Victoria, Texas.

Company, Well and Location	Init. Prod. Bbls.	Depth
OSAGE COUNTY—		
Gray & Tolson, 11, cn½ n½ sw 27-21n-9e	10	2230
Tidewater, Graves 10, se nw ne 9-24n-7e	*	2776
Lewis Prod. 16, nw nw nw 21-24n-7e	145	2705
Kewanee O & G, Alfred 3, sw sw ne 26-26n-6e	408	2890
PAWNEE COUNTY—		
Greer & Tarr, Comer 3, se nw sw 32-21n-9e	*	2408
PAYNE COUNTY—		
Twin State, Spennings 1, se sw nw 5-19n-5e (pb 3682)	15	3760
PONTOTOC COUNTY—		
Magnolia, Norris 8, sw nw se 21-2n-7e	¶3½ 2551	3785
Heenan & Coe, Wooley 1, sw nw sw 22-2n-7e	¶1½ 1944	4340
Skelly, Metropolitan Life 2, nw se sw 23-2n-7e	1468	4310
Metropolitan Life 3, ne se sw 23-2n-7e	1605	4340
Metropolitan Life 4, se nw sw 23-2n-7e	1346	4370
Simpson Oil, Westheimer 3, nw sw nw 26-2n-7e	919	4353
Carter Oil, Richards 22, sw se se 30-2n-7e	3324	4370
Magnolia, D. Hardin 9, sw ne nw 30-2n-7e	¶13½ 3417	3805
Moore, Smith 1, nw nw nw 31-2n-7e (pb 4182)	432	4262
Mobely 2, ne nw ne 32-2n-7e	6144	4300
Mid-Continent, McCrackin 1-A, nw ne nw 31-5n-4e	32	1972
POTTAWATOMIE COUNTY—		
Haliburton, Thomas 1, se ne ne 9-7n-4e (pb 3565)	*	3905
SEMINOLE COUNTY—		
Texhoma, Harjo 1, cn½ n½ ne 11-5n-7e	*	4425
Rodgers, Pilot 1, sw ne nw 16-9n-7e	100	3481
STEPHENS COUNTY—		
Carter & Ring, Arm 11, nw nw ne 26-1s-5w	6	668
L. A. Wilkens, Crump 11, nw ne ne 15-2s-5w (pb 905)	8	908
George Pace, Massey "B" 1, nw ne nw 12-2s-8w	6	2131
Raizen Bros., Price 10, ne se nw 10-3s-5w	1	240
TULSA COUNTY—		
Bostick, Ishmael 3, nw se se 13-18n-12e	18	1502
Sand Springs Home, Watson 1-A, se ne ne 31-18n-13e	¶1-25	1705

*Failures; †Junked; ¶Million cu. ft. gas.

New Rush Field

NEW DISCOVERY IS A GOOD WELL; CHASE EXTENDED

WEEKLY STAFF REPORT

Wichita.—Drilling operations fell below the average in Kansas during the first week of the new year. Outstanding event was the opening of a new pool, the second, in Rush County, and the completion of the extension well of the Chase pool of Rice County.

The pool opener was Schoenfeld & Kitch's Winget 1, SEc 15-16s-16w, which began showing for a strong producer early in the week. The well, which is 11 miles north of production in the Otis gas pool of Rush County, swabbed 400 barrels of oil in 10 hours from the Lansing lime at 3245 feet, after drilling only two feet into the formation. Eight-inch casing was cemented on top of the lime and the plug was scheduled to be drilled out the latter part of the week.

Chase Field Extended

The other good well is Shell Petroleum Corporation's Soeken 1, CNW 10-19s-9w, one mile northeast of production in the Chase pool of Rice County. The well was showing for a producer from the Kansas City lime, pumping 458 barrels of oil and 297 barrels of water in 17 hours from a total depth of 2921 feet. The well originally was drilled to the Siliceous lime, but when production failed in that formation, the hole was plugged back to test a showing of oil had in the lime. The well has given Rice County its twenty-seventh distinct oil pool. Following acidization, the well pumped 360 barrels of oil in 24 hours.

Lario Oil & Gas Company's Morgan 1, NWc SE 23-24s-13w, four miles southeast of St. John in Stafford County, is the newest and largest producer in the St. John pool. The well pumped 2192 barrels of oil natural from between 4063 and 4087 feet in the Siliceous lime. It is a southeast offset to the Stanolind Oil & Gas Company discovery well which made 1258 barrels of oil initial. Oil was first found in the Lansing lime in the St. John pool, but when production began falling off, wells were deepened to the Siliceous lime, which proved to be more productive.

Skelly Oil Company's Kipp 1, SEc NE 27-25s-14w, northwest of Pratt, which was a failure in the Siliceous lime, and was plugged back to the Kansas City lime, was swabbing and was expected to make a good producer. The first test showed 33.7 gravity oil and a little gas.

Joe Aylward, Western Kansas Oil & Refining Company and others have staked location for Meis 1, NWc 6-12s-17w, one-half mile south of Lario Oil & Gas Company's Marshall 1, a wildcat north of Hays in Ellis County, which was completed for 795 barrels of oil from the Siliceous lime. Meis 1 is approximately two miles east of Lario's Walters 1, discovery producer in the Walters pool, which has a potential of 1048 barrels of oil coming from the Topeka lime.

W. M. McKnab et al's Charles 1, NEc SE 20-32s-5e, east of Winfield in Cowley County, had 1000 feet of oil standing in the hole, coming from the Bartlesville sand from between 3088 and 3090 feet. In 48 hours, the well had filled 1900 feet with oil, after being deepened one foot. Five-inch casing was to be run to shut off water encountered higher in the hole.

Russell County Active

Russell County remained high in the activity scale. National Refining Company's East Reinhardt 1, NWc NE 36-14s-15w, which extends production south in the Harbaugh pool, filled 1600 feet with oil in six hours from the basal sand at 3155 feet, and at last reports, the oil was still rising in the hole. Top of the Siliceous lime was found at 3139 feet, and the first oil appeared at 3141 feet. Top of the basal sand was found at 3147 feet, and the flow increased from 3145 to 3148 feet. Operators reported the best pay was found from 3150 to 3154 feet.

Two potentials were reported from the Trapp pool. W. I. Southern, Inc., completed Boomhower 4-A, in Section 30-15s-13w, for 2356 barrels of oil from the Siliceous lime at 3252 feet following acid treatment. Coralena Oil Company's Trapp 12, in the same area, was completed for 2586 barrels of oil from the Siliceous lime at 3259 feet following acidization.

Skelly Oil Company's Boxberger 2, NE NW NE 33-13s-14w, southeast of Russell, in the Boxberger pool, had the Siliceous lime from 3274 to 3278 feet and pumped 1598 barrels of oil natural in 24 hours.

A new producer in the Roubach sector of the Sullivan pool of southwestern Russell County, is Hartman & Blair's Roubach 6, NWc 2-14s-15w, which was bottomed at 3307 feet in the Gorham sand, and made 2025 barrels of oil in 24 hours.

Four New Silica Tests

Gulf Oil Corporation, one of the most active concerns in Rice County, staked location for four new locations in the Silica pool and one location in the newly discovered Mantel pool, northwest of Raymond. The locations in the Silica pool are as follows: A. J. Stoltz 7, NWc SE NW 32-19s-10w; Stoltz 8, NEc SW NW 32-19s-10w; Junior Stoltz 6, NEc SW NW 5-20s-10w, and Junior Stoltz 7, NEc NW NW 5-20s-10w. Cellar and pits have been dug and materials are being moved in on the grounds. The fifth location is Hirsch 1, SEc SW NE 18-20s-10w, a west offset to the discovery producer in the Mantel pool, which was completed for 418 barrels of oil from the Siliceous lime. It was

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COUNTY	Portion	Price	COUNTY	Portion	Price
Anderson	North	$2.65	Lee	Entire	$2.10
Anderson	North	1.25	Liberty	North	2.40
	South	1.25		South	2.55
Angelina	North	2.75	Liberty	Entire	1.50
	South	2.75	Limestone	Entire	1.80
Austin	N. E.	2.85	Live Oak	Entire	1.55
	S. W.	2.85			
			Matagorda	North	3.35
Bastrop	West	3.25		South	2.90
Bee	East	2.75	Milam	East	2.40
	West	3.25		West	2.40
Brazoria	North	3.70	Montgomery	North	2.90
	South	3.40		South	3.00
Brazos	North	1.70			
	South	1.55	Nacogdoches	Entire	1.90
			Newton	North	2.05
Calhoun	North	2.50		Central	1.80
	South	2.50		South	2.25
Chambers	North	2.40	Nueces	N. E.	1.80
	South	1.70		West	1.80
Chambers	Entire	2.85			
Cherokee	Entire	2.25	Orange	Entire	2.05
Colorado	East	3.60			
	West	3.60	Panola	Entire	2.10
			Polk	North	2.10
De Witt	East	1.90		South	2.10
	West	1.90			
Duval	Entire	2.05	Refugio	Entire	1.45
Ft. Bend	North	2.25			
	South	2.75	Sabine	Entire	1.20
			San Augustine	Entire	1.50
Galveston	Main-land	2.25	San Jacinto	North	1.70
				South	2.25
Goliad	North	2.85	San Patricio	Entire	3.35
	South	2.50	Shelby	Entire	2.05
Gregg (comb.)	Entire	1.80	Smith	Entire	1.90
Grimes	Entire	3.00			
			Trinity	Entire	2.90
Hardin	North	2.05	Tyler	North	2.20
	South	2.05		South	2.20
Harris	North	2.75			
	South	2.25	Upshur	Entire	1.50
Houston	North	1.70			
	South	1.70	Victoria	East	2.40
				West	3.10
Jackson	North	2.75			
	South	2.40	Walker	North	2.20
Jasper	North	2.05		South	2.10
	Central	2.05	Waller	North	1.80
	South	1.30		South	1.80
Jefferson	North	2.75	Washington	East	1.55
	South	2.75		West	1.55
			Wharton	North	3.10
Lavaca	North	2.75		South	3.10
	South	2.75	Willacy	Entire	2.20

LOUISIANA PARISH OWNERSHIP MAPS

PARISH	Portion	Price	PARISH	Portion	Price
Avoyelles	North	$6.00	Point Coupee	North	$6.00
	South	6.00		South	6.00
Beauregard	North	6.00	St. Landry	North	5.00
	South	6.00		South	7.00
Calcasieu	Entire	8.00	St. Mary	Entire	8.00
Cameron	East	5.00	St. Martin	South	7.00
	West	7.00			
			St. Tammany	North	6.00
Evangeline	North	6.00		South	6.00
	South	6.00			
			Terrebonne	North	6.00
Iberville	North	5.00		South	6.00
	Central	5.00			
	South	5.00	Vermilion	South	6.00
Jeff Davis	North	6.00	Vernon	North	6.00
	South	6.00		South	6.00
Jefferson	North	6.00	West Feliciana	North	6.00
	South	6.00		South	6.00
Lafayette	Entire	8.00			
			ARKANSAS—		
Lafourche	Entire	8.00	Miller County	Entire	7.00

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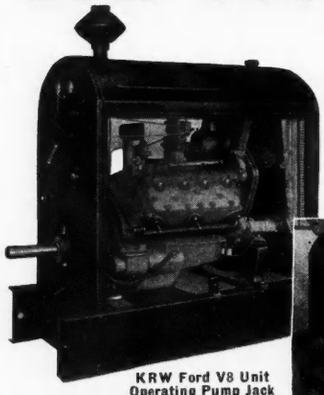
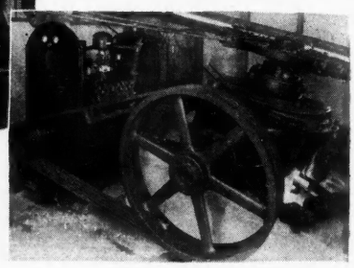
KRW-FORD V8 UNIT



KRW Ford V8 Unit Operating Pump Jack



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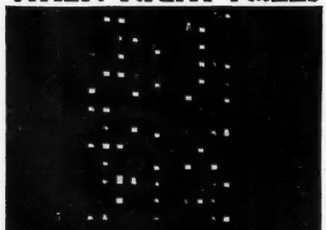
WHEN NIGHT FALLS



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drilled by the Rosespring Drilling Company.

Phillips Petroleum Company's Krampe 13, SEc 31-19s-10w, in the Silica area, made 1234 barrels of oil in 17 hours from the Siliceous lime. The last hour it was doing about 88 barrels of oil an hour.

Charles Buckley and others were ready to start drilling operations at Bailey 1, SWc NW 19-20s-6w, southeast of Lyons and northeast of the big Hauschild pool.

Western Kansas Oil & Refining Company got another big producer in the Warkentine pool of Harvey County during the week. The well is their Denno 1, CNW SW 12-23s-2w, which was on potential after drilling out the plug. During the first 30 minutes after the well was opened, it flowed 60 barrels of oil from the chat at 2983 feet. Top of the chat was found at 2968 feet. The gas flow was estimated at 8,000,000 cubic feet, much greater than other wells in the pool.

Rig was up for Edwin G. Bradley's Haury 1, NWc SW 13-23s-2w, one-half mile south of production in the pool.

May Extend Bloomer

Magnolia Petroleum Corporation's Mueller 1, NWc NE 1-18s-11w, one-half mile south of the Bloomer pool of Barton County, found the Siliceous lime at 3269 feet, and a saturated core was recovered from between 3276 and 3280 feet. The crew was cementing seven-inch casing and preparing to standardize before drilling in.

National Refining Company's McLean 5, SEc 25-17s-11w, farthest northeast producer in the Bloomer field of Barton County, and deepest Siliceous lime well in the area, was attracting much attention last week after deepening from 3298 to 3307½ feet. After being acidized and shot at the old total depth the well made a potential of 693 barrels. When operators deepened the hole filled 3100 feet with oil in five hours with no water. McLean 5 is 26½ feet in the lime.

Minnehoma Oil Company's Smith 1, NWc NE 20-18s-13w, three miles south of Hoisington in Barton County, topped the Lansing lime at 3080 feet and ran eight-inch casing to 3112-feet. A show of dead oil was picked up between 3241 and 3243 feet, and at last reports, hole was being made below 3268 feet with nothing showing. Operators hope to complete the well in the Siliceous lime.

Robert McNeely and Watchorn Oil & Gas Company's Lemke 2, SWc SE 10-11s-23w, north of Wakeeny in Trego County, pumped 656 barrels of oil natural from the Kansas City lime at 3503 feet.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Atlantic, Moran 1, se se nw 25-17s-11w	1226	3315
Herndon Drlg., Schneider 1, cnw 18-18s-15w	¶51½	3570
Lario et al, Myers "A" 3, cn½ s½ sw 13-20s-11w	614	3315
COWLEY COUNTY—		
Tom Palmer, Pierce 1, se se sw 14-31s-3e	*	3391
ELLIS COUNTY—		
Minnehoma O & G, Haller 1, ne ne sw 10-11s-18w	*	3501
ELLSWORTH COUNTY—		
Carter et al, Mollhagen 3, cwl nw 35-17s-9w	1257	3183
McPHERSON COUNTY—		
Shell, Meyers "A" 2, cse ne 14-19s-2w	635	2945
Ohio Oil, Decker 4, se nw se 20-21s-1w	1100	3304
Decker 8, ne se se 20-21s-1w	1391	3312
McBride, Koehn 1, ne ne ne 33-21s-3w (otd 3443)	25	3455
RENO COUNTY—		
Shell, Lyman 1, csw se 16-24s-4w	lcn.	abd.
Stanolind-Amerada, Ladd 1, nw sw se 9-26s-4w	*	4089
Shell, M. Whipple 3, sw nw ne 15-26s-9w	5014	4144
RICE COUNTY—		
Continental Oil, Meyers 2, nw ne sw 30-18s-7w	1730	3189
Torry-Feaster et al, Brankau 3, se se nw 32-19s-9w (otd 3239)	480	3250
Texas Co., C. Schartz 3, sw se se 33-19s-10w	2255	3311
Magnolia, Bayer 4, nw sw nw 7-20s-10w	565	3299
Skelly, Thompson 1, nw nw nw 28-20s-10w	*	3288
Douglass et al, Theede 1, nw nw sw 9-21s-7w	2335	3370
Garden & Haines, Hauschild 1, sw sw se 11-21s-7w	1819	3400
ROOKS COUNTY—		
Empire, Hamm 1, sw nw nw 24-8s 19w	*	3598
RUSSELL COUNTY—		
J. C. Shaffer, Inc., Polcyn 8, se se ne 10-14s-15w	805	3255
Urschell & Seilingson, Polcyn "B" 1, nw ne se 10-14s-15w	985	3276
SUMNER COUNTY—		
Stelbar, Earker 8, cn½ n½ sw 33-31s-1w	930	3680
Olson & Shell, Community 5-A, cw½ se se 11-32s-2e	*	3193

*Failures; †Junked; ¶Million cu. ft. gas.

FEWER LOCATIONS

Wichita.—With a cold wave sending the average temperature in Kansas to a near zero level, locations dropped to only 31 for the past seven-day period. Twelve starts were received from Rice County, seven from Barton County and five from Russell County. McPherson County made three reports, Reno County two, and Chautauqua and Sumner counties one each.

Operators of the state completed 25 wells during the week past, 17 being producers with an initial daily production of 23,166 barrels. One gas well was completed for 51,500,000 cubic feet of gas in the Otis area. Six starts resulted in failures and there was one abandoned location.

KANSAS QUOTA

Wichita.—The Kansas Corporation Commission established the January allowable for Kansas at 175,851 barrels of oil a day, an increase of 13,000 barrels over the December allowable, and 10,251 barrels higher than the figure recommended by the United States Bureau of Mines.

Although nine pools in the state are without market or transportation facilities, authorities here explained the 786 barrels allotted these fields will be added to the allowable in other fields, thus preventing a shortage in the state's allocation.

Tulsa.—Members of the Petroleum Accountants Society of Oklahoma, in meeting here January 8, heard F. B. Plank, of the Empire Companies, Bartlesville, lead a discussion on questions relevant to federal income tax, depreciation and other requirements. J. E. Johnson, superintendent of automotive equipment for Tide Water Associated Oil Company and president of the Petroleum Motor Transport Association of Oklahoma, delivered an address on new rates imposed on motor equipment used by oil firms in various operations.

SEEKS COMPACT AID

Thompson asks renewal support by Roosevelt

Washington, D. C.—Administration support for extension of the federal authority for the Interstate Oil Compact, which expires September 1, next, was asked of President Roosevelt January 8 by Colonel Ernest O. Thompson, chairman of the Texas Railroad Commission and of the Interstate Compact Committee.

Visiting the White House with Jesse H. Jones, chairman of the Reconstruction Finance Corporation, Colonel Thompson asked that the President recommend a two-year extension of the law to Congress, reporting that the agreement was working satisfactorily and that the states are attempting in every way to meet their production problems.

In addition to the states now in the compact, he said, it is expected that California and Michigan will join this year.

Introduction of legislation extending the compact authority is expected, but it has been reported that there will be considerable opposition offered to continuance of the law, representatives of large producers having taken the stand that the compact has been a failure.

The President was also asked by Colonel Thompson to recommend extension of the Connally Contraband Oil Act, which expires on June 15, but held that the industry does not need any additional regulatory legislation and told the President that it is in excellent shape and anticipating a highly satisfactory year.

"We do not need the so-called federal control," Colonel Thompson said after leaving the White House, "and, indeed, a revival of that program has not been suggested in any quarter, as far as I know. Gasoline is not high when figured without the tax, the producer is getting a fair price for the raw product, and consumer is getting the finished product for a fair and reasonable price so far as the oil itself is concerned."

Indefinite continuance of the contraband oil act will be sought by Senator Connally of Texas, author of the measure, in a bill he will introduce in Congress next week. Continuance of the legislation has been given the approval of Secretary of the Interior Ickes, and Senator Connally this week said that he anticipated little or no opposition to retention of the law.

SEEKS BLOWOUT DATA

Commission inquires as to causes, remedies, etc.

Austin, Texas.—The Texas Railroad Commission has sent forms to all Texas oil companies asking for detailed data on any "wild wells" which have been encountered during the past seven years.

The commission has received several requests from insurance companies asking for reports on these wells in order that proper rates of insurance might be determined.

In commission hearings on well spacing, control of this particular class of well is frequently an important question. Most of the major companies contend that this is one of the most important reasons for wide spacing, es-

pecially in those fields where large volumes of gas are encountered. The commission has had a great deal of difficulty, however, in finding at a hearing any definite information relating to the cause for these blowouts in specific instances. The following information has been requested:

1. Location of Accident—(a) Name of company or operator. (b) Lease or farm name on which accident occurred. (c) Number of well (if discovery well, so indicate). (d) Indicate if well was located in developed field or if it was a wildcat, giving the name of the county.

2. Wild Wells (which did or did not catch on fire)—(a) Give history, manner and date well got out of control. (b) Did well crater? If so, give facts surrounding same, and how it started. (c) Did well catch on fire? If so, how was well extinguished? (d) Was there any loss of life or injury to life and property? (Please explain in detail). (e) How was well brought under control? Explain in detail and give potential of well before and after accident, if available.

3. Fires from Other Causes (Explain in detail)—(a) As a result of pipe line breaks. (b) As a result of casinghead gas due to cleaning out well or producing to lease tanks. (c) As a result of lightning or other causes such as burning debris, lighted boilers or electrical appliances. (d) Was there any loss of life or injury to life and property? Explain in detail.

CRUDE RUNS UP

American Petroleum Institute figures indicated that crude runs were up 75,000 barrels a day in the week ended January 2, while crude production was down 11,850 barrels. Gasoline stocks showed a substantial increase, and fuel oil stocks declined further.

Reports from refining companies with 89.9 percent of the nation's refining capacity indicated that the industry as a whole ran to stills 3,030,000 barrels of crude during the week, and that all companies had in storage at the end of the week 62,661,000 barrels of finished and unfinished gasoline and 106,330,000 barrels of gas and fuel oil. A week previously, the gasoline stocks had totaled 60,873,000 barrels, and the gas and fuel oil stocks 106,889,000 barrels.

EMERGENCY ORDER

Austin.—An emergency order providing 10-acre spacing in the Sayre and Keyes fields in Winkler County was issued by the Texas Railroad Commission last week.

At an informal hearing held in Austin, operators in the field reported that although development had taken place on the 10-acre basis, this program had been followed without the necessity for a rule from the Railroad Commission.

The commission has scheduled a hearing to be held at Midland on January 26. Evidence will be taken at this hearing upon which future rules will be based.

Increase Output

MONUMENT GETS A LARGER PRODUCTION QUOTA

WEEKLY STAFF REPORT

Hobbs, N. M.—Back allowable accumulated by Monument field operators during the latter part of 1936 due to failure of the purchasers to absorb the proration quota assigned individual wells can be made up, according to representative of the Oil Conservation Commission. A number of properties were not adequately served during the 3½-month period that the field's allowable was pegged at 12,000 barrels daily. Effective January 1 the allowable was boosted to 22,000 barrels daily, or an average of 83.6 barrels per well daily. This average is below that assigned other Lea County areas that are on a flat well allowable and also the Hobbs field, which are 92 barrels and 85.9 barrels per well daily, respectively, but an equitable adjustment between fields is to be made on the February schedule.

Soliciting of crude connections by majors in Lea County is currently at its most competitive stage since the first trunk line extended over from West Texas. Atlantic Pipe Line Company, Shell Pipe Line Corporation and Humble Pipe Line Company launched their campaign for more oil about mid-December, and Gulf Refining Company, pipe line division, has since become a strong contender for Monument field oil. The former is seeking delivery on crude contracts made in 1930 with Hobbs field producers. Deliveries were held in abeyance in order to prorate production among the reluctant buyers when the East Texas field caused this sulphur contaminated crude to be frowned upon in most refining circles. Demand for Lea County crude has not subsided even though the state allowable was boosted to a record level of 92,800 barrels daily effective January 1. Continuation of the active drilling campaign now under way in Lea County will result in the allowable advancing above 100,000 barrels daily within a few months.

12 New Locations

Lea County accounted for 12 locations and 8 oil completions the past week. Monument field retained its leadership with 4 new wells and twice as many locations. Gulf Oil Corporation, owner of 45 wells and second to Amerada Petroleum Corporation in rank, started work on four new tests. These include State-Graham 2-F, NE NE SE 36-19s-36e; State-Kutter 3-B, C NW NW 28-19s-37e; G. C. Matthews 4, C NE SE 6-20s-37e; and Whitmire 2, C NW NE 8-20s-37e. The company also made location for State-Sunshine 3, C NE SW 30-20s-37e, north end of Eunice field.

Anderson-Prichard Production Corporation, Oklahoma City, continued its string of prolific wells on the H. M. Britt-Conoco permit. Well No. 1-B-5, C SE SW 5-20s-37e, averaged 132 barrels oil per hour for 3 hours through 2-inch choke on 7-inch casing with 3-inch drill pipe in hole. It also produced gas at rate of 20,000,000 feet daily. The well was drilled to 3870 feet, or 302 feet sub-sea. Packer will be installed on tubing to cut down the gas/oil ratio. Stanolind Oil & Gas Company's O. J. Gilluly 1, C SW SW 8-20s-37e, gauged 80 barrels oil per hour on three-quarter-inch choke from lime at 3858 feet, or 304 feet below sea level. The gas/oil ratio was 100 feet per barrel, an unusually low rate for a large producer.

Repollo Oil Company's N. P. Bordages 2-A, SW SE SW 21-19s-37e, edge location in northeast portion of Monument area, is a candidate to become the third failure on this flank of the structure. Swabbing test after using 3000 gallons of acid in lime at 3982 feet, or 350 feet below sea level, accounted for only 5 barrels fluid, 80 percent sulphur water, in 24 hours. It is below the normal oil horizon. New locations for Monument includes the following: Amerada Petroleum Corporation's S. Phillips 2, C NE SW 33-19s-37e; Humble Oil & Refining Company's State 2-D, C NE NE 20-19s-37e; Shell Petroleum Corporation's State 4-B, C SE NW 36-19s-36e; and Continental Oil Company

NEW MEXICO

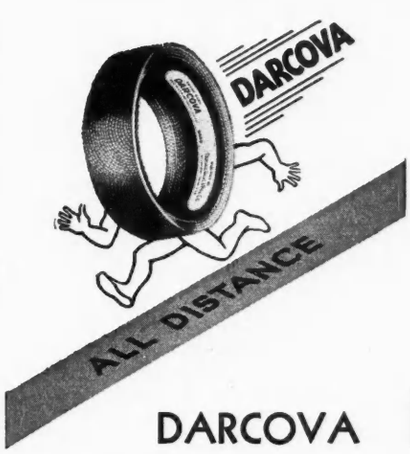
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eunice Field)—		
Amerada, Houston 4, c sw se 7-21s-36e	750	3890
Shell, State-Endura 2-A, ne ne ne 12-21s-35e	53	3891
LEA COUNTY (South Eunice Field)—		
Empire, Walden 1, c se nw 21-22s-37e	265	3600
LEA COUNTY (East Jal Field)—		
The Texas Co., Black 1, c sw ne 21-24s-37e	410	3495
LEA COUNTY (Monument Field)—		
Continental, Sanderson 2-A-11, c n½ nw se 11-20s-36e	2000	3875
Ohio, Barber 6, c nw sw 5-20s-37e	3600	3890
Barner 7, c se nw 5-20s-37e	5000	3894
Stanolind, Gilluly 1, c sw sw 8-20s-37e	3600	3858

*Failures; †Junked; ¶Million cu. ft. gas.

ON YOUR MARK.. GET SET.. GO!

for greater profits at any distance with

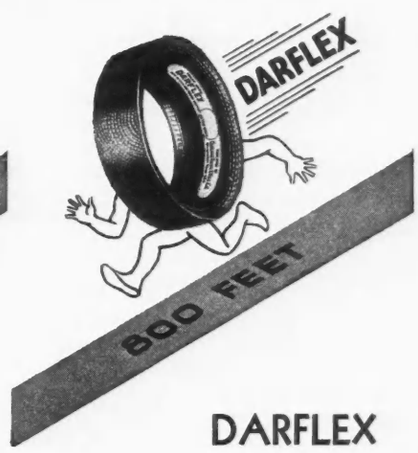


DARCOVA

DARCOVA (Orange Label) the standard for more than 30 years under severe service at all depths.

DARVAL

DARVAL (Blue Label) for service in wells to approximately 2,000 feet in depth.

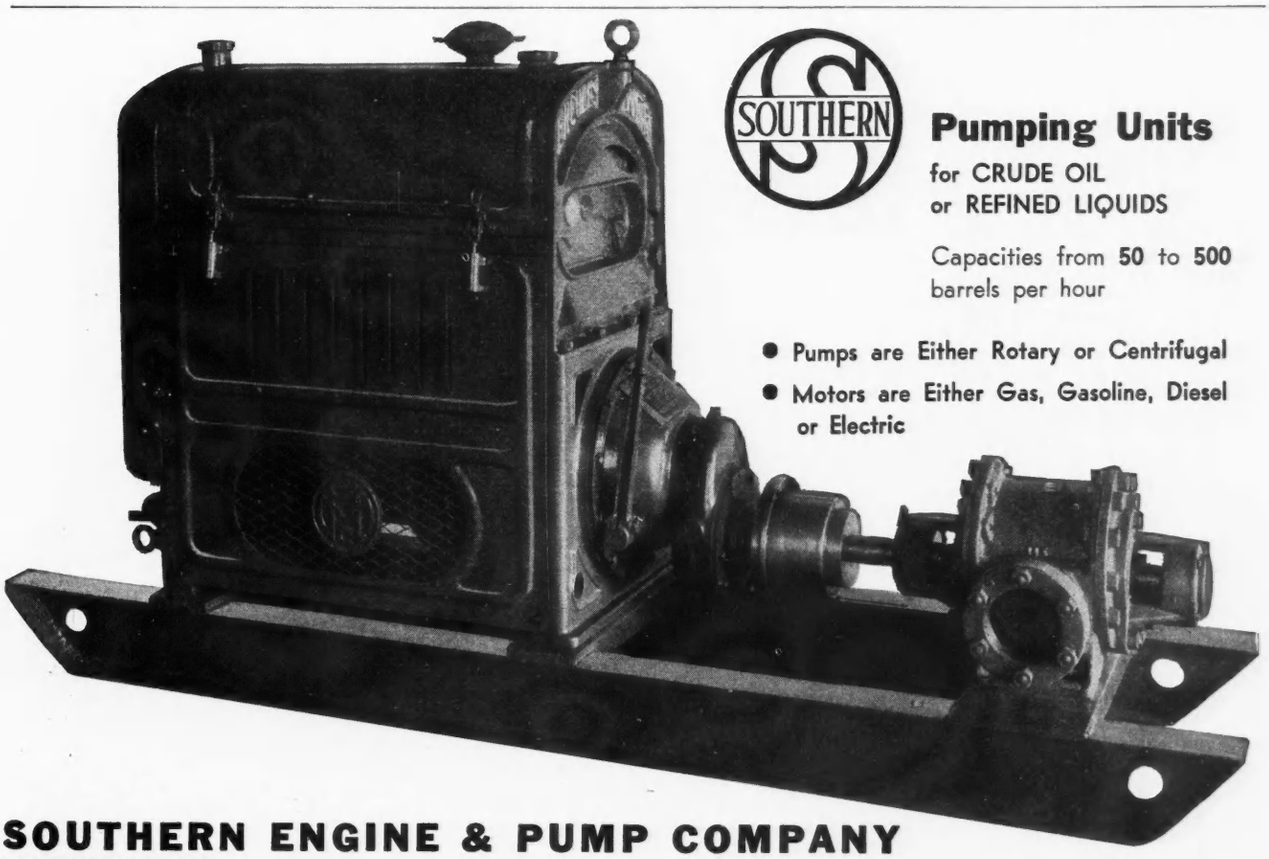


DARFLEX

DARFLEX (Green Label) the popular favorite for wells to 800 feet in depth.

The **original** composition valve cups are manufactured **only by**

DARLING VALVE & MFG. CO., Williamsport, Pa.



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for CRUDE OIL or REFINED LIQUIDS

Capacities from **50** to **500** barrels per hour

- **Pumps are Either Rotary or Centrifugal**
- **Motors are Either Gas, Gasoline, Diesel or Electric**

SOUTHERN ENGINE & PUMP COMPANY

HOUSTON, TEXAS **KILGORE, TEXAS**

NATIONAL BANK OF TULSA

TULSA, OKLAHOMA

Statement of
Condition December 31, 1936

RESOURCES

Cash and due from Banks	$22,463,399.16	
U. S. Government Securities	18,551,884.91	
Other Bonds and Warrants	6,598,659.60	$47,613,943.67
Loans and Discounts		14,080,067.55
Overdrafts		853.77
Income Receivable Accrued		182,143.90
Stock in Federal Reserve Bank		210,000.00
Investment in Bank Premises		2,296,000.00
Customers' Liability under Acceptances		8,205.00.
TOTAL		$64,391,213.89

LIABILITIES

Deposits		$56,870,480.59
Acceptances Executed		8,205.00
Income Collected not Earned		63,933.24
Interest, Taxes, etc., Accrued		79,172.82
Reserve for Preferred Dividend		52,500.00
Capital — Preferred	$ 3,000,000.00	
Capital — Common	2,000,000.00	
Surplus	2,000,000.00	
Undivided Profits and Reserves	316,922.24	7,316,922.24
TOTAL		$64,391,213.89

COMPARATIVE DEPOSITS

December 31, 1933	$28,016,837.43
December 31, 1934	37,292,321.66
December 31, 1935	46,600,899.11
December 31, 1936	56,870,480.59

Member Federal Deposit Insurance Corporation

et al's Britt 1-B-18, C NW NW 18-20s-37e.

Amerada Petroleum Corporation's H. L. Houston 4, C SW NE 7-21s-36e, inside location for the west portion of the Eunice lime area, flowed 29½ barrels oil per hour natural through one-inch choke from lime at 3890 feet, or 293 feet sub-sea. Gas volume was rated at 450,000 feet daily.

Extend North Eunice

Oil production in the North Eunice sandy-lime area was broadened one mile to the west when The Texas Company's V. M. Henderson 1, SE SE NE 30-21s-37e, flowed 13 barrels oil in 8 hours after using 2000 gallons of acid at 3820 feet. It was later shot with 200 quarts of nitro at 3725-3820 feet, but results were not ascertained. Magnolia Petroleum Company's Carson 3, C SW SW 28-21s-37e, an inside location, flowed 20 barrels oil the first hour after 80-quart shot at 3752-3760 feet. Geo. F. Getty Oil Company's D. C. Hardy 2, C SW SE 20-21s-37e, was making 2,000,000 feet of gas through bridge after 240-quart shot at 3800 feet.

The Texas Company's Jas. F. Black 1, C SW NE 21-24s-37e, offsetting production in the north extension of the East Jal sandy-lime belt, averaged 17.3 barrels oil per hour on completion gauge after 220-quart shot at 3410-3495 feet, with an elevation of 3225 feet. El Paso Natural Gas Company, owner of a trunk line that transports sour and sweet gas from Lea County fields to El Paso and points further west, has started operations on three tests in this general area. Locations follow: Geo. W. Toby 1, C SE SE 12-24s-36e; W. H. Harrison 1, C NW NW 7-25s-37e; and Harrison 2, C NW NW 29-24s-37e.

NEW STANDARD

Dallas, Texas.—The California Company of Montana, producing subsidiary of Standard Oil Company of California, and active in Texas for about 15 years, became known as Standard Oil Company of Texas effective January 1. The latter name was adopted by the California unit in July, 1935, in connection with the operation of its refinery at El Paso and later a natural gasoline plant in Ward County, Texas. Pasotex Pipe Line Company, another subsidiary that transports West Texas crude from Wink station to the border city plant, will retain its original identity for the time being, according to reports. District headquarters of Standard Oil Company of Texas are located here, with Henry J. Hawley in charge. Louisiana operations carried on by the Dallas office will be known as The California Company of California.

BIG PURCHASER

New York.—The petroleum industry is an enormous purchaser. It is the largest buyer of tank cars and of tank ships. It creates one of the greatest industrial markets for steel and iron, motor vehicles, electric power, internal combustion engines, building material, Diesel motors, meters, pumps, pipe, measuring devices, lumber, tanks, rope, gages, cable, paint, hose, cement, rubber, metal products, brass, tin, chemicals, containers, and other products.

Expect More Tests

WEST TEXAS MAY EXCEED PREVIOUS DRILLING WORK

NORTH & WEST TEXAS

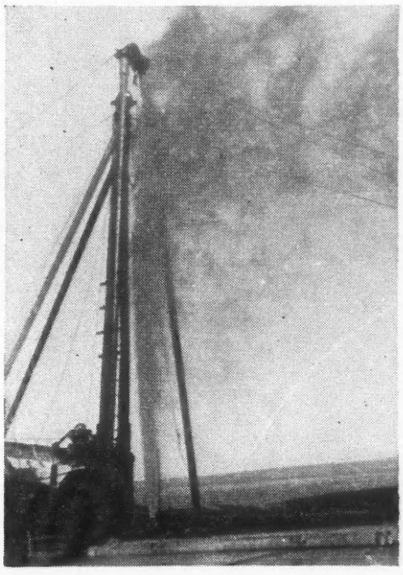
WEEKLY STAFF REPORT

Midland.—Expansion of drilling operations in West Texas beyond the peak level reached in 1936 is likely to materialize shortly. Supported by new appropriations, healthy demand for crude and prospects of an early advance in price postings, majority of the operators are preparing to make the most of their opportunities. Ample number of undrilled locations on proved acreage accumulated during the past year. Many operators have lagged behind in keeping abreast of offset drlilling, and are now preparing to equalize this drainage. One company, confronted with about 50 offsets awaiting attention, was credited with staking 100 locations the past week. Bulk of the routine drilling will center upon Ector, Ward and Winkler counties during the forepart of the current year.

Tests at Decisive Depth

An unusual number of wildcats and outpost locations for established fields had reached the critical stage the past week. In Gaines County, Stanolind Oil & Gas Company's J. A. Morrow 1, near C SW¼ Section 20, Block A-24, P.S.L. Survey, about 4 miles northwest of a small pumper on the Kirk tract, showed 90 feet of oil with 2200 feet of drilling fluid when formation tester was used at 4500-4720 feet. First saturated lime was cored at 4608 feet, or 1285 feet sub-sea, indicating a high structural position for the area. Casing will be cemented on top of the saturated lime for a production test. Amerada Petroleum Corporation's Robbins 1, 1¼ miles south of Kirk 1, resumed drilling with cable tools after cementing 7-inch pipe at 3503 feet, with an elevation of 3255 feet. In the Seminole area, Gaines County, Amerada et al's Averitt-Ohio 1-A, has been listed as a completion, flowing 201 barrels of 34.5 gravity oil and 1,000,000 feet of sulphur gas through 1-inch choke after plugging back from 5054 feet, or 1736 feet sub-sea, to 5032 feet. Ownership and operation of this wildcat producer was scheduled to revert to Harry Adams et al effective January 9. It was shut in for storage January 5.

Andrews County has two prospects that are commanding attention. Near the south line, Sinclair Prairie Oil Company's Emma Cowden 1, situated 2½ miles northwest of a small producer in Ector County, swabbed 33 barrels of oil in 7 hours after removing crude used for circulation while cleaning out from nitro shot of 330 quarts at 4110-4300 feet. The hole is bottomed at 1165 feet sub-sea, or comparatively high on structure. Top of brown lime was logged at 3810 feet. Wm. F. Hanagan, B. H. Blakeney et al's C. W. Logsdon-Amerada 1, C SW¼ Section 5, Block A-32, P.S.L. Survey, cored three sections



Removal of control head to pull a string of tools provided the occasion for the above photo of Danciger Oil & Refineries, Inc., Owens-Snebold Oil Corporation and Fortex Oil Corporation's Henry Dorsey 2, which was recently completed as a northeast extension for the Hawley field, Jones County, Texas. On brief potential gauge the well flowed at rate of 210 barrels of 43.9 gravity oil per hour from sand at 2222 feet.

of oil stained lime between 4540-4616 feet. Drilling was halted at 4654 feet, or 1307 feet below sea level, for drill stem test, but results were negative. It will be carried to its contracted depth of 5000 feet.

Yoakum Test Shows

In Yoakum County, Texas Pacific Coal & Oil Company's Bennet 1, located about one-half mile west of the only producer in the county, logged first trace of oil at 5050 feet, or 1491 feet below sea level, and was still in saturated section in coring below 5085 feet. It is slightly higher on structure, and is being counted upon to stir up an incentive for other lease owners to launch development work.

Northern Ward County offers a semi-wildcat producer in lime section lying west of the sandy-lime production trend that may lead to more exploration work. D. J. Finley, A. W. Cherry et al's John Sealy Estate 1, NE NE NE Section 54, Block F, GMMB&A Survey, filled 300 feet with pipe line oil after successfully cutting off upper water by cementing 5½-inch liner between 2665 feet and 3065 feet. It is bottomed in pay at 3203 feet, or 490 feet sub-sea. Tubing was run later in the week to acidize. This prospective producer is 1½ miles northwest of Magnolia Petroleum Company's George Sealy 1, completed in 1930 on a 24-section leasehold, flowing 37 barrels of 29.2 gravity oil and 2,000,000 feet of gas after two nitro shots in lime at 3036-3065 feet. Production from this wildcat had declined to 4 barrels daily on pump when the hole was cleaned out in December, then increased to a head of 50.67 barrels oil in 14 hours after treating with 2000 gallons of acid solution. The latter was rigging up to pump last week. The new test on the Sealy tract encountered water in the horizon that yields oil in the discovery well of the area.

The first twin well for the Estes section of the Grand Falls district, Ward County, where two oil zones overlap, has been completed. F. H. E. Oil Company, Fort Worth, initiated the plan in completing its L. Richter 3-A, north corner Section 27, flowing 418 barrels oil in 6 hours after 250-quart nitro shot at 2855-2945 feet, with an elevation of 2615 feet. Humble Oil & Refining Company proved an additional one-half mile of territory for the lower pay in deepening its L. Richter 3, Section 27, from 2550 feet to lower pay at 2850-2950 feet. This well flowed 246 barrels oil in 6 hours after shot. It was making 7 barrels daily from the upper sandy-lime zone.

Operations have been started by York

WEST CENTRAL TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
Brown & Gardner, Triplett 1	*	1381
CALLAHAN COUNTY—		
Merriett Drl. Co., Caldwell 1	*	617
Mesa Verde Oil Co., Sherrill 2	40	1670
Moon & Cox, Hickman 1	*	618
H. O. Phillips et al, Mason 1	¶½	417
L. A. Warren et al, Griggs 1	*	1295
COLEMAN COUNTY—		
Anzac Oil Corp., Morris 13-C	*	2309
D. R. Semmes et al, Stewardson 5	25	1684
EASTLAND COUNTY—		
Anderson & Drury Oil Corp., Greggs 2	75	3056
Ashburn & Luke, Scott 1	25	3118
Hoffman & Page Co., J. W. Fox 1	¶1.8	3235
Monark O&G Co., Fee 2	20	1555
PALO PINTO COUNTY—		
W. K. Gordon et al, Canty 1	*	3555
Palo Pinto Oil Corp., Strawn Coal Co. 17	†	3240
TP Coal & Oil Co., Fee 5	¶7.9	3060
SHACKELFORD COUNTY—		
Albany Oil Co. & Freeman, Hastings 1	*	1836
Baker & Pardue, Davis 3	68	1570
Butler & Horn, Morris-Buie 8	200	1577
Charter Oil Co., Baker 1	*	1636
Dean Bros. & Adkisson, Jackson 1	*	1206
Harris & Little, Isenhower 1	*	1012
A. Housley et al, Reynolds 5	5	922
T. W. Keyes et al, R. L. McGough 1	7	572
Morton & King, Davis 1	*	1932
Owens & James, Morris-Buie 5-A	216	1603
Roeser-Pendleton, Inc., Dawson 15	175	1615
Roeser-Pendleton, Inc.-Humble, Morris-Buie 7, sec 191	60	1610
Morris-Buie 8, sec 191	120	1610
Sandefer & Thompson, Alexander 3-A	25	1655
T. K. Simmons et al, Harvey 12	20	1737
Tannehill et al, Mathews 32	*	1144
Ungren & Frazier, Alexander 3	90	1636
West Texas O. & P. Co., Morris-Buie 10	110	1600
White & Duncan, Davis 1	*	1795
STEPHENS COUNTY—		
Hanlon Gasoline Co., Winston 1	*	4670

*Failures; †Junked; ¶Million cu. ft. gas.

& Harper, Inc., Midland, on a contracted 5000-foot test for a 5000-acre wildcat block in northern Winkler County and east of New Mexico line. Location is on the Munson & Gunter land, C NW NW Section 7, Block C, G. & MMB&A Survey, about 5½ miles northeast of the Keystone field, nearest production. Tide Water Associated Oil Company is credited with having purchased acreage protection to the extent of about $20,000, based upon geophysical picture.

WEST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CRANE COUNTY (McCamey Field)—		
Navarro Oil Co., M. M. Dawson-Conoco 1	*	2603
Rushwold Oil Co., Hughes-Gibbs-Conoco 1	497	2274
Texas Co., Richard King 27	181	2506
ECTOR COUNTY (Goldsmith Field)—		
Gulf, C. A. Goldsmith 10	2180	4200
Shasta Oil Co.-Cordova Union Oil Corp., C. Scharbauer 1	1622	4202
T. P. Coal & Oil Co., C. Scharbauer 1	1571	4215
ECTOR COUNTY (North Cowden Field)—		
Amerada-Phillips, Holt 2	477	4302
Stanolind, Mrs. T. B. Robers 4	1029	4296
GAINES COUNTY (Wildcat)—		
Amerada-Harry Adams et al, Averitt-Ohio 1-A	201	5054
HOWARD COUNTY—		
Ed. S. Holman, Inc., T. P. Land Trust 3	688	2330
Superior, Dora Roberts 33-B	1392	2976
LOVING COUNTY (Wheat Field)—		
H. C. McCauley-West Prod. Co., Reagan-McElvain 1	196	4278
PECOS COUNTY (Pecos Valley Field)—		
Kirk et al, Potts 1	142	1770
PECOS COUNTY (Torborg Field)—		
Stanolind-Conoco, J. H. Tippett 11-C	*	620
PECOS COUNTY (Yates Field)—		
Ohio, Yates 37-B	3900	1206
SCURRY COUNTY—		
C. W. Guthrie et al, T. E. Sorrells 1	14	1777
UPTON COUNTY (McCamey Field)—		
Geo. Callihan, Healey & Walter, Cordova Union Oil Corp. 1	*	2951
Texas Consolidated Oil Co., Hughes-Texas Co. 3	715	2103
WARD COUNTY—		
Empire, McDonald 16	1205	2460
McDonald 17	1168	2460
FHE Oil Co., L. Richter 3-A	1672	2945
Gulf, E. W. Estes 8	718	2942
Hutchings 54	192	2791
Hutchings 57	190	3090
Hutchings 58	61	2754
Humble, University 6-F	1077	2752
Rio Bravo Oil Co., D. Olcott 14	2009	2503
Shell, Sloan-Owens 7	290	3044
Skelly, J. F. Hathaway 4	2096	2580
Standard Oil Co. (Texas) (was California Co.), Hardage-Wilson 4	268	2530
I. B. McFarland 1-37	3344	2650
WINKLER COUNTY (Henderson Field)—		
Atlantic, Fred Leck 6-A	7500	3080
Emperor Oil Co., J. W. Hess 1	10,000	3080
Sinclair Prairie, Fred Leck 7-A	4500	3086
WINKLER COUNTY (Keystone Field)—		
W. H. Dunning, Jr., J. M. Basharas-Jenkins 1	400	3390
WINKLER COUNTY (Sayre Field)—		
Gulf, L. Daugherty 14	1172	3000
Humble, N. R. Colby 10-A	1007	3010
J. F. Howe 19	¶5.3 & 1454	3008
Illinois Oil Co., McCutcheon-Conoco 7-A	1152	2975
Magnolia, J. B. Walton 50	817	2960
WINKLER COUNTY (Scarborough Field)—		
Richardson Oils, Inc., Scarborough-Empire 4	462	3042

*Failures; †Junked; ¶Million cu. ft. gas.

WILDCAT FINDS GAS

Denton County test flows 12,000,000 feet

Dallas.—Estimated yield of 12,000,000 cubic feet of dry gas was developed by Bolivar Drilling Company et al's J. P. Knox 1, northern Denton County wildcat, as result of blowout January 5 after drilling hard sand at 1951-1953 feet. It is located in the R. Howard Survey, A-542, about 1½ miles northwest of Bolivar. Spray of salt water accompanying the gas flow was believed to be from sand at 1538-1539 feet that also showed a little gas. Seven-inch pipe set at 1472 feet will be lowered to cut off this water sand. Nearest oil production is the Pilot Point heavy oil pool, located near the northeast corner of Denton County.

New District Depth Record

Sinclair Prairie Oil Company and Sunray Oil Company have authorized abandonment of A. C. McCall 2, located on a geophysical prospect near Sivells Bend, northern Cooke county, after failing to encounter oil or gas in Ordovician series at 8275-8331 feet. This wildcat established a new depth record for North Texas. Total of 16,292 feet of hole was drilled in reaching the Ordovician, as the first two tests on the McCall 55-acre lease, W. H. White Survey, were junked. Production test for Joe A. Worsham, Dallas, et al's J. S. Clark 1, Cooke County wildcat, located about 4 miles southeast of the Bruhlmeyer field, has been delayed by title difficulties. Sand carrying oil saturation in the lower Strawn series was logged at 2238-2254 feet.

Broken sand series, carrying evidence of oil, logged between 3847 and 3864 feet by Rapp Drilling Company et al's J. R. Singleterry 1, near Collinsville, Grayson County, resulted in a minor lease and royalty play in the area the past week. Owners are preparing to run pipe for a production test. Olson Drilling Company et al's D. R. Utiger 1, projected Ordovician test for the Preston Anticline, Grayson County, was drilling in shale at 2620 feet, according to late reports.

In northeastern Collin County, E. A. Parkford et al's Mrs. W. L. Fagg 1, two miles northeast of Blue Ridge, completed contract depth and abandoned in upper Glen Rose section of Trinity at 3514 feet.

TEXAS PANHANDLE

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CHILDRESS COUNTY—		
Fain Drl. Co. et al, T. M. Russell 1	*	3001
GRAY COUNTY—		
Champlin Ref. Co., H. B. Lovett 1	575	2891
Empire O&R Co., W. C. Archer 5-C	440	3225
Kewanee O&G Co., R. E. Smith-Rest 21	874	3260
King Oil Co., J. C. Vallmert 7-N	492	3282
Stanolind, W. E. Cobb 9-C	185	3328
HUTCHINSON COUNTY—		
J. H. S. Bonner, Tr., J. W. Moore 1	†	1245
Gulf Oil Corp.-Panhandle Ref. Co., Dial-Perkins 64	245	3082
Dial-Perkins 65	290	3035
Phillips Pet. Co., E. T. Timms-Moore 4	†	1905
Turman Oil Co.-Plains Pet. Corp., Whittenburg 4-B	793	2724

*Failures; †Junked; ¶Million cu. ft. gas.

This wildcat attracted considerable attention last October when slightly saturated oil sand was found in Paluxy at 2661-2771 feet, with an elevation of 626 feet. Pipe was cemented for a swabbing test, but the well showed only a trace of oil with a heavy head of water.

Shreveport.—C. J. Wrightsman Oil Company of Tulsa, Oklahoma, opened an office during the past week in Shreveport, with force composed of geologist, land man and clerk.

NORTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Brown & Kriss, G. R. Campbell 3, blk 11	10	1236
Jim Fish et al, D. W. Fish, 4, blk 84	5	1150
Golding & Cochran, G. B. Hamilton 1, sec 6	†	1136
Hampton-Jones et al, L. H. Farmer 1	*	1491
BAYLOR COUNTY—		
Consolidated Oil Co., Portwood 3-Y, sec 3138	*	1479
W. P. Morris & Leslie Spoonts, C. T. Porter 1-B	*	1636
CLAY COUNTY—		
C. T. Everts et al, G. Bullington 1, blk 16	25	1202
COOKE COUNTY—		
Anderson-Kerr Pet. Co., M. E. Johnson 1	*	2139
Barbee et al, I. E. Norman 1	*	2560
M. L. Harris et al, R. D. Williams 1.	*	2185
Rapp O&G Co., J. M. Little 1, blk 60.	*	3005
Ripps & Ungerman, W. L. Johnson 4	106	1921
Sinclair Prairie Oil Co.-Sunray Oil Co., A. C. McCall 2	*	8331
United Producers Co., R. W. Trew 8	*	1683
JACK COUNTY—		
Cato Oil Co., et al, J. A. Raley 1-B	426	3060
K. E. Edmonds et al, Hunt 4	*	480
Gwynn & Overby, W. B. Love 4	261	2997
Thos. D. Humphrey, J. M. Birdwell 7	443	3017
J. M. Birdwell 9	444	3011
Hattie B. Madden et al, R. E. Hilburn 1	*	812
A. P. Nicholson et al, M. Spearman 1 sec 1	*	535
Yorktex Pet. Co. et al, D. G. Clayton 1	319	3073
MONTAGUE COUNTY—		
Bourland & Gannon, W. W. Jones 2, blk 6	50	1813
WICHITA COUNTY—		
A. E. Blair et al, Mary Cody 1, blk 311	*	1893
Dinsmore & Stipe, S. B. Burnett 9, sec 1	*	689
Duke, Kent & Felty, Casper Guyer 2.	5	152
Melat & Graham, Munger 1-C	†	3080
Oil Exploration Co., S. P. Gibson 1, blk 302	37	1918
Pois & Schultz, Foster-Allen 2-C, sec 2	*	1300
WILBARGER COUNTY—		
Summitt Oil Co., Waggoner Est. 3, sec 14	15	1679
Waggoner Ref. Co., Waggoner Est. 2-CC sec 5	6	1905
YOUNG COUNTY—		
W. F. Collins et al, N. L. Hardy 1, sec 260	30	615
W. F. Dodson et al, D. L. Wolf 1, sec 297	*	750
Fresno Oil Co., J. W. Cox 9, blk 18.	10	602
Gambill & Reid, J. C. McDonald 1, sec 1	*	701
Kimmell, Lee & Co., Prideaux 4	10	657
Lupton & Jerome McLester, M. Choate 1	300	3643
J. J. Moran et al, W. B. Howard 16, sec 3401	35	908
Owenwood Oil Corp., G. P. Stewart 2-D	*	904
Panhandle Ref. Co., Prideaux 16	5	738
C. C. Robertson, Tr. et al, N. L. Hardy 2, sec 260	*	710
Swink & Skinner, A. E. Logan 4, sec 2251	*	634
A. E. Logan 5, sec 2251	*	580
West & Honea, G. P. Stewart 7, sec 1492	25	852

*Failures; †Junked; ¶Million cu. ft. gas.

Gets Top Rating

YOUNG COUNTY PRODUCER FLOWS 250 BARRELS DISTILLATE

Graham, Texas.—A large structure situated several miles east and southeast of Graham, Young County, earned top rating among the prospects awaiting development in North Texas the past week in scoring a large gas and distillate producer from the Marble Falls sand at 4243 feet. This strike was made by A. R. Eppenauer, Fort Worth, et al's Eddleman Bros. 1, near the center of a 3000-acre block and in the southeast corner of T. & N. O., Section 1. Production test through casing gauged 16,000,000 feet of wet gas and about 250 barrels of 68 gravity distillate daily, but back pressure built up on the separator indicated that the flow of gas was probably double the above figure.

Equipment was moved in late last week to snub in a string of 2½-inch tubing with packer to complete Eddleman Bros. 1 at its present depth. Owners expect the well to convert itself into an oil producer if packer can be successfully landed so as to cut off a portion of the big gas flow encountered in the upper section of the Marble Falls sand, which was penetrated 34 feet.

Marble Falls Sand

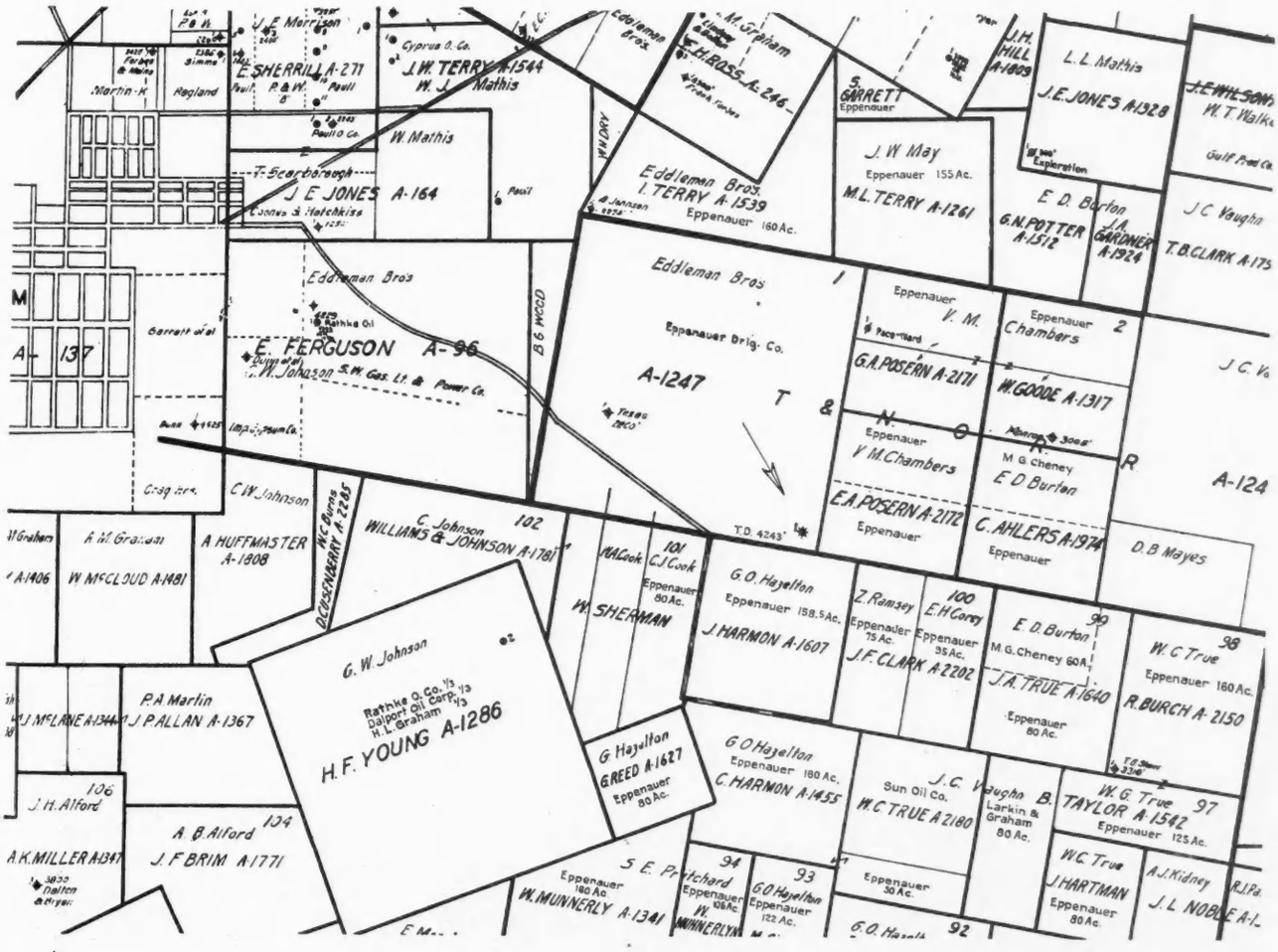
The Marble Falls sand has commanded respect as a source of prolific oil and gas production in Young County. The most attractive area undergoing development is the Rathke field, six miles southwest of Graham and adjacent to the Brazos River. A number of wells have been completed with a dual proration allowable in the latter area by cementing an intermediate string of casing between the 3800-foot Caddo lime and the 4100-foot Marble Falls sand zones.

The east Graham discovery was drilled with cable tools. It has an elevation of 1177 feet. Palo Pinto lime was logged at 1171-1360 feet. First Strawn sand appeared at 1740 feet, and top of Smithwick shale at 3600 feet. Caddo lime section of this shale series was called at 3758-4050 feet, with oil and gas showings. These geological markers were determined by Robert Imbt, geologist for Eppenauer and associates.

Eppenauer has heretofore operated in West Texas and New Mexico as producer and drilling contractor, except for a nominal drilling program on shallow properties in Coleman County. He has announced that a steady development campaign will be carried out on the east Graham block, and that rotary rigs will be used hereafter in order to lower the cost and speed up drilling time.

Rathke Oil Company et al hold lease on 1500-acre block, adjoining Eppenauer et al's leasehold on the west, and are drilling C. W. Johnson 2, located near east line of the H. F. Young Survey, A-1286, a mile southwest of the new strike. Johnson 2 logged top of the Caddo lime at 3838 feet, with an elevation of 1136 feet, and was drilling below 3850 feet. H. L. Graham and Dalport Oil Corporation, headed by Warren L. Todd, Dallas, own one third interest each in this 1500-acre block and 889 acres in the Rathke field with Rathke Oil Company.

Large gas and distillate producer brought in from Marble Falls sand zone last week by A. R. Eppenauer, Fort Worth, et al's Eddleman Bros. 1, located 2½ miles east of Graham, is rated as an important strike for the deep pay zone in southern Young County. The well, indicated by arrow, was preparing to snub in tubing late last week after showing for more than 16,000,000 feet of gas with 250 barrels of 68 gravity distillate daily at 4243 feet. (Map courtesy Southwest Mapping Company, Fort Worth).



Stops Drilling

RAINES COUNTY WILDCAT AT CONTRACT DEPTH

WEEKLY STAFF REPORT

Tyler, Texas.—Operations were halted temporarily last mid-week on Humble Oil & Refining Company's O. L. J. Easter 1, Trinity test on the Emory geophysical prospect in eastern Rains County, after completing contract depth at 7515 feet without penetrating the lower Glen Rose lime series. The hole is bottomed in broken anhydrite and shale formation, having topped the anhydrite at 6985 feet, or 6547 feet below sea level. Reports indicate that operations will be continued until water is encountered in the lower Glen Rose, or equivalent of the Rodessa field's oil and gas horizon. Heavy duty rotary in service at this location will likely be used in the drilling of a Trinity test on the Opelika structure, Henderson County.

Location for the deep test at Opelika which will be drilled by a three-way partnership, comprised of Tide Water Associated Oil Company, Seaboard Oil Corporation and Humble Oil & Refining Company, will be made public within two weeks. These companies hold lease on a block of 12,000 acres.

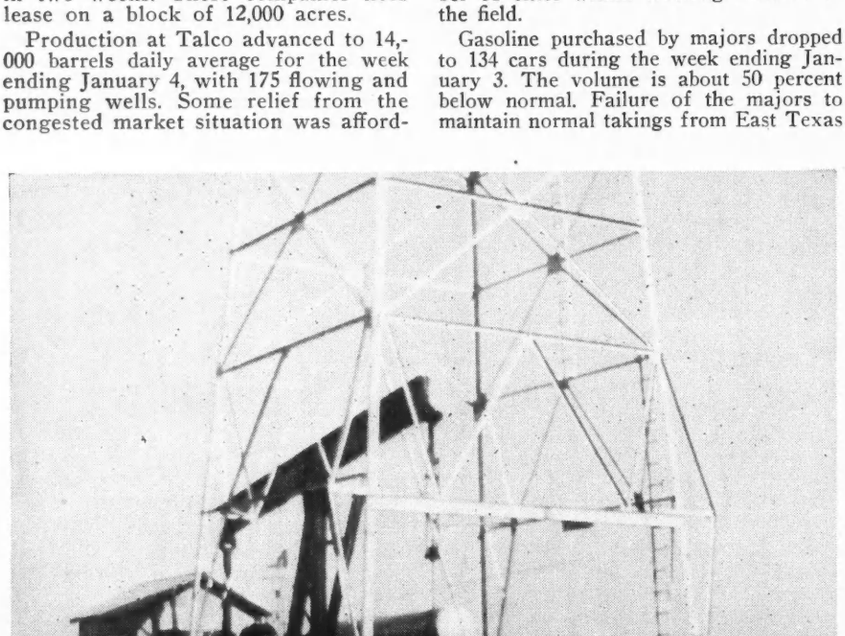
Production at Talco advanced to 14,000 barrels daily average for the week ending January 4, with 175 flowing and pumping wells. Some relief from the congested market situation was afforded through Humble Pipe Line Company having stepped up its crude deliveries from Talco to Longview junction to 7290 barrels daily average during the week ending December 28. Heaters have been installed at each of its four main line stations, which are spotted at 16-mile intervals along the 8-inch carrier. Return of severe cold weather will likely affect the line capacity, as Talco oil is high cold test, and some of the lower grades will solidify when exposed to low temperatures.

Stocks Increase

[*Continued from page 43*]

by plants selling to tank truck dealers vary from 3½ to 4 cents per gallon at the dock, thereby accounting for the 10 to 12-cent retail price postings appearing in a number of cities within trucking distance of the field.

Gasoline purchased by majors dropped to 134 cars during the week ending January 3. The volume is about 50 percent below normal. Failure of the majors to maintain normal takings from East Texas plants in recent weeks is interpreted in some circles as meaning that the crude price hike instituted by Continental Oil Company in its buying territory will not be matched for some weeks. Pending suits against majors in federal court at Madison, Wisconsin, is believed to be a factor against a uniform price boost being given producers simultaneously by the larger buyers of crude.



The Sulphur Bluff field, Hopkins County, second Paluxy sand area for Northeast Texas, has scored flowing production from each of the 12 tests finished since completion of Hager, Luse & Russ Interests' discovery pumper, shown above. Elevated tank along side engine house is a converted boiler used to stock engine fuel.

EARNEST MONEY

Mexia, Texas.—Pending sale of controlling stock interest in the E. L. Smith Oil Company, a substantial producing concern, to Lion Oil Refining Company, El Dorado, Arkansas, became virtually assured January 5 when the latter deposited $229,249.25 in a local bank to option 267,000 shares. Purchase contract calls for the payment of $8.50 per share on or before April 1, 1937, and the majority of the shareholders have agreed to participate.

Scott City.—Announcement has been made that D. M. Dryden and associates, of McPherson, are building a refinery southwest of this city at a cost of approximately $65,000, and is being constructed by the Winkler-Koch Engineering Company. The plant will operate on crude produced by the Atlantic Oil Refining Company in the Shallow Water pool in Scott County, discovered early in 1936. Reports state Atlantic will drill additional wells as more oil is needed.

EAST TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Humble, L. R. Lindsey 6 (42.63-ac)	8400	3779
Hunt Oil Co., S. A. Plowman 7 (48.15-ac)	9000	3725
KILGORE AREA—		
Sun, W. B. Walker 4 (80-ac)	750	3594
Sun and Seaboard Oil Corp., M. T. Cole 43 (266.17-ac)	2000	3534
LONGVIEW AREA—		
Gulf, Lacy-Snider 17 (107.53-ac)	4500	3478
Magnolia, V. L. Goolsby 9 (73¾-ac)	9100	3565
Shell, G. W. Richey 26 (169.4-ac)	10,000	3593
Sun, G. W. Tate 10 (64.8-ac)	9300	3569
FRANKLIN COUNTY (Talco Field)—		
Magnolia and Humble, C. L. Owings 4 (119¼-ac)	360	4300
HENDERSON COUNTY (Cayuga Field)—		
Joe A. Worsham et al, J. & J. Wathen 3 (62-ac)	2000	4102
COLLIN COUNTY—		
E. A. Parkford et al, Mrs. W. L. Fagg 1	*	3514
FREESTONE COUNTY—		
R. L. Wheelock, J. L. Collins et al, W. R. Boyd 1	*	4511
RED RIVER COUNTY—		
J. S. Abercrombie Co.-Harrison Oil Co., Southern Pine Lumber 3	†	2311

*Failures; †Junked; ¶Million cu. ft. gas.

Deep Production

PEARSALL EDWARDS LIME DEEPEST YET DISCOVERED

WEEKLY STAFF REPORT

San Antonio.—Amerada Petroleum Corporation has established the deepest commercial production ever found in the Edwards lime with Halff and Oppenheimer 8 in the Pearsall Field, Frio County. The well topped the lime at 6228 feet and after drilling only two feet blew in for an estimated 15,000,000 to 25,000,000 cubic feet of gas per day. It came in January 2, blowing only gas, but shortly afterwards started spraying a little oil which tested 37.9 gravity.

The above test, located in the San Antonio Ditch Company survey, drilled to 6120 feet where 9⅝-inch casing was set to protect the hole. It was drilled ahead from this point with cable tools. The tools were lost in the hole when the well blew in and it has been killed to fish for these tools. If the fishing job is successful, the well will be deepened slightly into the formation in an effort to bring in an oil producer.

The test has an elevation of 569 feet, derrick floor. It showed oil in the Navarro sand at 4015-78 feet, after topping the lower Navarro at 3975 feet. Austin chalk was topped at 5360 feet and Buda lime at 5900 feet. These formations are regular producers in the field and showed oil in the Halff and Oppenheimer 8. The test, however, was intended as a 10,000-foot hole and these horizons were cased off. The Georgetown lime, immediately overlying the Edwards horizon showed some gas.

This producer is just northwest of the same company's Halff and Oppenheimer 6 which was completed last year in the Austin chalk flowing 1365 barrels of oil in one hour and 25 minutes.

Discovery of the deep Edwards lime production in this field is considered to be of major importance in that this particular horizon is productive in only a few fields. Where it is productive, however, it ordinarily recovers from 30,000 to 65,000 barrels per acre. These recoveries have been in the three major Edwards lime fields in Caldwell and Guadalupe Counties, namely Luling, Salt Flats and Darst Creek, all producing from 2100 to 2800 feet, the latter being the deepest present Edwards lime production.

The Pearsall field has been looked upon as a tremendously important development as it provided a new type of development for South Texas. Should its exploration work in the Edwards lime prove to be as prolific as is suggested, it should pave the way to a large deep development campaign through the Balcones sector.

Branyon Wild Well

Whisenant and Trenchard's W. A. Magee 1, in the northern portion of the Branyon field, Caldwell County, blew in January 4, while being completed in the Austin chalk at 2140 feet making 100 barrels of oil per hour. It is the largest producer completed in this sector of the Balcones Fault zone in years and indicates an increased play for big production in the fractured areas of the Austin chalk fields. The chalk was topped at 1984 feet in this well, casing being landed 6 feet below the top of this formation.

Austin chalk production has gained a great deal of attention through this shallow trend during the past few months with inexpensive development costs, good recovery through acidization and fair allowables providing excellent profits. Several new fields have been opened since December 1, 1936, along this trend and they should be central points of activity during the next few months.

The Branyon area at this time is the most active with eight operations. Others range down to one operation per pool.

Edwards Lime Failure

Possibilities of finding Edwards lime production in the Branyon field were lessened with the abandonment of Adams and Lyles' W. M. Ellison 5, which topped Austin chalk about 200 feet low at 2240 feet, faulted out at 2333 feet, where it went into the top of the Edwards lime. Two drill stem tests were made, the first showing several joints of drilling mud and the second developing sulphur water. It has been plugged and abandoned.

Brown Drilling Company's G. M. Blackwell 1, seven miles southwest of Lockhart and in the John Roe survey of Caldwell County, is still cleaning out for completion at 2191 feet. It is to be placed on pump where the well is estimated to be good for about 35 barrels per day without acidization. It topped the Austin chalk at 1918 feet.

Red Bank Oil Company's Nellie Gramm 1, in the Chreisman area of Burleson County, is considered to be a failure in the Edwards lime at 6226-40 feet after showing considerable salt water with a slight show of oil. Five-inch casing has been pulled and tests will be made through the 7⅝-inch pipe, which will be perforated around 3500 feet in the Navarro.

Watch Wildcats

SEVERAL IMPORTANT COAST TESTS APPEAR PROMISING

Corpus Christi.—A number of wildcats and outpost wells in the South Texas Gulf Coast were being closely watched as they were being tested. Several give promise of opening new pools, while others are extending present producing areas or indicate new sands.

New Victoria Gas Field

Magnolia Petroleum Company's Willie Beck opened a new gas field 4½ miles northwest of Telferner in Victoria County when it flowed 27,500,000 cubic feet of gas daily through open casing. On ⅛-inch choke it built up pressure of 1000 pounds on tubing and showed 1500 pounds closed-in pressure on casing. The well originally drilled to 4812 feet, but plugged back and perforated at 3578-82 feet. It is in the T. & N. O. Railway Survey No. 1. The company plans further exploration in the area in an effort to open an oil producing area.

A new development campaign is being commenced to the 6700-foot sand just discovered in the Saxet field, Nueces County. Several abandoned wells have resumed operations in an effort to pick up production in this Frio horizon. This sand recently was opened by Hiawatha Oil Company's N. J. Griffith 6, which flowed 150 barrels of 48 gravity oil per day under 1050 pounds pressure through ⅛-inch choke. Production is coming from perforations at 6749-58 feet, the total sand section being from 6725-59 feet.

Test Nueces Wildcat

About 12 miles southwest of Corpus Christi in the vicinity of London, another Nueces County wildcat is being tested. Wellington Oil Company's M. L. Stockton 1, Section 25, showed salt water in a series of perforations between 6156 and 4812 feet. Perforations were cemented after each of the tests, and the well is now shut down preparatory to running testing device inside of the casing. Casing again will be perforated.

The above company, jointly with

Pan-American Production Corporation, is attempting to establish deeper production in the Clara Driscoll field, also Nueces County, with Sevier 1-A. The well showed considerable distillate with a large volume of gas after perforating at 5425-30 feet. Salt water broke in and the perforations have been cemented. The well will be reperforated for completion.

Less than 2 miles north of the above well, Al Buchanan and Blanco Oil Company's F. Gandy 1, Section 56, tested 500 pounds pressure with a little mud and gasoline at 5810-47 feet. It showed sand and shale section to below 5900 feet, but failed to develop anything on drill stem test. It is now shut down for orders at 5990 feet.

H. S. Moss et al have moved off rig from R. H. Coleman 1, Section 206, Nueces County, 1 mile south of the South Agua Dulce field, after blowing out through drill stem from sand at 6876-82 feet, likely the same sand from which Texon Drilling Company's Sevier test blew out and cratered some time ago. The well was killed, but the stuck drill stem was not recovered from the hole. Invincible Oil Company's Elliff 1, 1 mile southwest of the Texon's production in the above field, is drilling below 4700 feet. Texon Drilling Company is making hole below 2250 feet in Sevier 2-B, intended directional relief well for the company's wild crater on the same tract. Northwest of this production and ½ mile southwest of the Agua Dulce production, United Production Corporation is below 3750 feet in W. H. Harvey 1.

A new wildcatting play has been started, with two new locations being staked and a previously announced outpost test commencing operations. Danciger Oil & Refineries Inc.'s J. W. Bird, 1 mile west of the field, is drilling water well, while Stanolind Oil & Gas Company's J. W. Bird 1, south of this well, is rigging up. One mile north of the field, Stanolind is drilling around 1000 feet in Richard King 3. This field has come into prominence as a result of the showing of La Jita Corporation in the completion of an excellent producer in the Vicksburg just above 5700 feet.

J. I. Francis and L. A. Simonton's A. Lozano 1, 4000 feet southwest of Tom Graham's production just west of Premont in Jim Wells County, is coring below 2330 feet, shortly to test the first sand. W. F. Morgan has spudded Laughlin 1, ¼ mile north of this production.

Barnsdall Oil Company's K. J. Edwards, Lewis Survey, 9 miles northeast of Rockport and in the Lamar Townsite of Aransas County, was reaming at 7022 feet. This well is reported to have had oil and gas showings above this level, but no details have been announced.

OK SLO-SET OIL WELL CEMENT
FOR HIGH TEMPERATURES . . . SULPHATE RESISTANT

A NEW OK CEMENT FOR OIL WELL CEMENTING AT HIGH TEMPERATURES

Cementing of oil wells from 5,000 to 10,000 feet deep requires more time to pump the cement mixture into the well than at shallower depths, and this longer time plus the high temperatures sometimes encountered in deep wells makes it desirable to use a slow-setting cement on these jobs. Such a cement will not stiffen under high temperatures and pressures while being pumped into the well and thus slow down and even stop the cementing job before completion.

To meet the demand for such a product by the oil field operators, we have perfected our new product—

OK SLO-SET OIL WELL CEMENT

to meet the most exacting requirements of this type of oil field cementing.

OK SLO-SET CEMENT retains its flowability for a period of time amply sufficient for pumping the cement mixture completely into the well, under conditions of great depth, high pressure and high temperature. This is shown in the accompanying Setting Time Tests. When the period of delayed setting time is over, however, and the cement safely in place in the well, hardening takes place rapidly, as shown by the high tensile and compressive strengths in the accompanying tabulation, both at ordinary temperatures and at high temperatures.

OK SLO-SET CEMENT is a true Portland Cement and contains no admixtures or adulterants.

Use OK Slo-Set Cement and Protect Your Drilling Investment of Many Thousands of Dollars, which may be impaired or lost entirely by an unsuccessful cementing job

LABORATORY TESTS ON OK SLO-SET CEMENT
SETTING TIME TESTS
VICAT NEEDLE

Temperature	Mixing Water	Initial Set
70° F.	40%	8 hrs. 30 mins.
130° F.	40%	2 hrs. 35 mins.
194° F.	40%	3 hrs. 15 mins.

STRENGTH TESTS
POUNDS PER SQ. INCH

Temperature	Mixing Water	1 DAY		3 DAYS		7 DAYS	
		Tensile	Compressive	Tensile	Compressive	Tensile	Compressive
70° F.	40%	170	1,350	325	3,300	460	5,160
130° F.	40%	350	4,030	435	6,360	550	6,800
194° F.	40%	375	4,000	400	4,100	425	4,200

OKLAHOMA PORTLAND CEMENT CO.
1018 PERRINE BLDG. OKLAHOMA CITY

ARKANSAS PORTLAND CEMENT CO.
WALLACE BLDG. LITTLE ROCK, ARK.

PROTEST DRILLING
In fishing areas along lower Texas Coast

Corpus Christi.—Exploration and development of oil properties in the fish and oyster bed sectors of the Texas Gulf Coast is being sorely protested by both sportsmen and business interests here. This rise against leasing of bays and other waterways apparently is directed at the proposed sale by the State of Texas of leases in the vicinity of the new Flour Bluff field of Nueces County.

It now appears that considerable of the field will be extended into Laguna Madre and Corpus Christi Bay, bringing about marine drilling.

The Laguna Madre area is one of the important fishing areas of the Texas Gulf Coast, being the center of a thriving business. It is pointed out that great damage will be done through the drilling in the water, thus causing pollution and killing both fish and oysters. Complaints also are being made that the exploding of shots for geophysical work is driving the fish from these waters.

The situation simmers down to the decision of which is the more important natural resource to the State of Texas, or if development will cause pollution.

SILSBEE HEARING

Austin.—A hearing on the new Silsbee field in Hardin County has been scheduled for January 14 at Austin.

At this hearing the Texas Railroad Commission will take evidence upon which to base rules for the spacing, drilling, completion and operation of wells in the new field.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
Illinois Pet. Corp., Hill 1, 150′ nel & 1000′ sel (Hiway) of tr in J. A. Navarro sur. 6 mi n Cedar Creek..	*	1414
BEXAR COUNTY—		
Eckert & Son & Kelley, Barkmeyer 1, 810′ swl 520′ sel of 586-ac tr, Villepando sur. near Hildebrant rd. s of Eckert field. 12 mi e and s of San Antonio	*	1107
Roger Putnam, Simon & Anna Wetz 4, Simpson sur. (Von Ormy)	8	665
CALDWELL COUNTY—		
Adams & Lyles, Ellison 4, Dillard Cooper sur. (Braynon)	60	2185
Ellison 5, Dillard Cooper sur. (Braynon)	*	2333
Vaughey, Flowers & Leyendecker 2, Dillard Cooper sur. (Braynon)	35	1800
Whisenant & Trenchard, Magee 1, John Neil sur. (Branyon)	2500	2140
CALHOUN COUNTY—		
Humble and Plymouth, Welder 7-B, Agaton Sisneros sur. (Heyser)	500	5489
Portilla Drlg Co., Welder 6-C (Heyser) Sisneros sur	500	5475
DUVAL COUNTY—		
Birdwell Oil Co., Ignacio Martinez 1, sec 118 (Hoffman)	*	2874
Cox & Hamon, Peters, 35, Mary Chatham sur. (Lopez)	360	2168
Peters, 42, Mary Chatham sur. Sec. 322 (Lopez)	300	2154
Humble (Seven Sisters) A. H. Badgley 18 sur. 307	650	2477
Humble, DCRC, 2-C (Lopez) sur. 901	500	2076
DCRC, 3-C (Lopez) sur. 901	¶20	2099
Magnolia (Cole), Benavides 19, Porfirio Garza sur	250	2828
Hahl 52, (Loma Novia) sur. 67	40	2737
Herbst 8 (Loma Novia) sur. 70	900	2734
Peal 29 (Lopez) sur. 796 and sur. 383	400	2125
Smith & Hamill, Benavides 3, El Mesquite Gr.	*	3502
Sun (Kohler), Peters 1, sur. 161	¶35	2646
Westheimer & Daube, Campos 27 (Seven Sisters) sur. 224	700	2710
GOLIAD COUNTY—		
Magnolia, Weldon & Lackey 5, (N. Pettus) J. Gomez sur.	650	3715
Sun, W. T. Scarborough 7, (N. Pettus) sur. 25	500	3696
Weinert & Bostex Oil Co., Runge State Bank 4 (N. Pettus) S. B. Myers sur. 26	400	3715
GUADALUPE COUNTY—		
Bacon et al, Halm 1, 197′ nl & 150′ wl ne 40 acres of 331 ac tr Joseph Kent sur., 2 mi s Kingsberry, 477′ ne Suttle No. 1 Halm	*	1903
Eickenroht & Gallagher, Jahns 1, 150 ft el, 450 ft nl of 840-ac tr, Green Dewitt sur No. 13, 3 mi sw South Darst Creek also 1600 ft wl 2000 ft sl of sur	*	3205
Freeman Oil Co., Larison 2 (S. Darst Creek) Green de Witt sur No. 13	100	2410
Riddle Oil Co., Nolte et al 1, 6 mi e fr Seguin, 554 ft fr sel and 1910 ft nel of lse in J. Sowell sur, also 5250 ft to southerly nl and 1800 ft el of 135-ac tr 5½ mi se Seguin	50	1880
Schimmell, Grimm 2 (S. Darst Creek) Green de Witt sur, 400 ft s No. 1	125	2425
LEE COUNTY—		
Eleoussa Oil Co., Sanders 1, 330 ft sl and 200 ft el of 102-ac tr, J. Von Roeder sur	*	2500
LIVE OAK COUNTY—		
Martell Pet. & Sterrett, Whitsett Townsite 1, center of blk 55 in Juan Houghlingan sur, between 55 and Hiway No. 66, being 1700 nw of Callihan road	*	1040
McMULLEN COUNTY—		
W. L. McCoy, Searcy et al 1, (Crowther), sur No. 56	4	493
MEDINA COUNTY—		
E. P. Ruhmann, Sr., Chandler Est. 1, 2382 ft sl 150 ft el 380-ac tr, Decker sur	*	930
G. Whitting et al, Hondo Natl. Farm Loan 2, 330 ft sl and 2590 ft wl of sec 214, George S. Studer sur, ½ mi e No. 1, 4 mi se Hondo	*	1205
Will A. Wycoff, Bendele 1, 1275 ft wl, 150 ft nl of 321.5-ac tr, James Barnhart sur No. 593, ab 1733, 1 mi s D'Hanis	*	212
NUECES COUNTY—		
R. B. Bryant, Fred Frank 3 (Saxet) G. Frank Partition sur 416	450	5854
Crown Central Co., Rand Morgan 3-B (Saxet) sur 315	650	4448
Hiawahtha Oil Co., J. Griffith 6 (Saxet) Frank sur 416	700	6802
Houston Oil, Rand Morgan 15 (Saxet) Villareal gr	500	4828
Humble, Barnsdall, E. H. Johnson 1 (Flour Bluff) Encinal Gardens subd	600	6660
J. O. Phillips 3, (Flour Bluff) Flour Bluff Encinal Garden Tracts	750	6661
Magnolia, W. W. Walton 4 (Saxet) Page Lands sur	250	4849
Mid-Continent, C. Driscoll Sevier 1 (Clara Driscoll) E. Russell sur	650	3820
Pan American, Solar Sevier 1 (Saxet) G. C. & S. F. sur	350	4842
Renwar Corp. and C. Andrade, Fred Frank 4 (Saxet), n offset to Southern Minerals Corp. No. 4 Mastin	620	5845
Republic Nat. Gas Co., L. B. Hutchins 1, (Saxet) Kinney Lands	450	4389
Richardson Pet. Co., Cain & Sechrist 6 (Saxet) Russell Farm lots	700	4435
Richardson Pet. Co., Cain & Sechrist 12 (Saxet), Russell Farm lots	450	4453
Taylor Ref. Co., Incarnate Word Acad. 2, (Saxet Heights), Villareal sur	*	5140
Texon Drilling Co., Frank Buckholt 1 (Clarkwood)	400	4595
REFUGIO COUNTY—		
Hewitt & Dougherty, Lambert 36 (Tomoconnor), Swisher sur No. 6	2500	5913
Houston Oil, Fannie Heard 21 (Refugio), Refugio Town tr	500	4938
SAN PATRICIO COUNTY—		
Hooper & Rutherford, Willis 1, (Gregory), T. T. Williamson sur	*	7547
Humble, Godwin 2 (Taft), Taft farm lands	350	4010
STARR COUNTY—		
Howard Bass, Hayden et al 1, 185 ft nl, 555 ft wl of s½ blk 4, sur 47, porc 80, 5½ mi ne Rio Grande City	¶5	1444
VICTORIA COUNTY—		
Barnsdall and American Liberty, Pickering & Roos 11 (Placedo), A. & M. G. sur 5	850	4771
Magnolia, Willie Beck 1, 1500 ft swl, 330 ft sel of 132.8-ac tr T&NO RR sur No. 1, 4½ mi nw of Telferner, 3400 ft sel, 1500 ft swl of T&NO	¶27	4812
Charlie Sklar 3 (Placedo), sur A-304	150	4768
WEBB COUNTY—		
Mills Bennett, P. Vela 1, blk 1, sec 114 (Lopez)	600	2237
Glenn Harroun, A. Lopez 1, sec 110 (Lopez)	220	2275
O. W. Killam, A. M. Bruni 47, blk 5, sur 3, M. Arispe gr (Cole)	*	1394
Smith & Hamill, Benavides 17, blk 379, M. E. Hale sub, M. Arispe gr (Cole)	600	2930
Sun, Brennan-Benavides 1, blk 378, M. E. Hale sub, M. Arispe gr (Cole)	550	2928
ZAPATA COUNTY—		
H. & R. Oil Co., M. Garza Est. 9, blk 11, Douglas sub, Comitas gr (Escobas)	60	1260
Ivan Howard & R. F. Duggan, Cuellar Bros. 1, sec 248 (Cuellar)	*	1840
Magnolia, Haynes 10, sec 7, Haynes sub, Comitas gr (Comitas)	50	1085
A. D. Haynes 11, sec 7, Haynes sub, Comitas gr (Comitas)	60	1088
B. W. Roscoe, Bustamante Heirs 6, Share 33, Fansler Partition, Comitas gr (Escobas)	75	1208
Valley Osage Oil Co., Haynes 4, blk 14, Haynes sub, Comitas gr (Comitas)	150	1054

*Failures; †Junked; ¶Million cu. ft. gas.

FIELD IS EXTENDED

Government Wells gets a mile north extension

Laredo.—Loma Novia sand production in the Government Wells field, Duval County, was defined on the north by Magnolia Petroleum Company's C. W. Hahl 1, in the southwest corner of the tract, Section 41 which made salt water and built up 700 pounds gas pressure with little volume at 2410-16 feet. It is one mile north of Loma Novia sand production.

Wildcats Fail

Several key wildcats in the district have failed to find production and likely will be abandoned. Argo Oil Company and John Clopton's Smith-Corkill 1, Section 61, 2 miles south of the Hoffman field, tested salt water at 2841-46 feet in the Government Wells sand and is drilling ahead. On the east side of the same field, Bridwell Oil Company has abandoned Ignacio Martinez 1 after testing salt water through perforations at 2796-2802 feet in the Loma Novia sand. Several miles southeast of this field, Oliver Oil Company has spudded in K. Shaffer 1, in Section 146.

Magnolia Petroleum Company is preparing to spud A. L. Labbe 3, 1 mile north of the Labbe field, Duval County, which will test showings in the Loma Novia sand encountered in several other wells in the immediate area. On the same general trend, but across in McMullen County, Humble Oil & Refining Company is shut down at 1790 feet in H. C. Edrington 3. Nearby, Rowan & Hope's H. C. Edrington 1, N SE Section 81, is ready to spud.

LA BLANCA PRODUCES

Pantano completing first commercial well

Mission.—Pantano Oil Company has definitely established production on the La Blanca structure in the northeastern portion of Hidalgo County, through the completion of J. C. Engelman Jr. 1-B. The well is located in Lot 8, Section 259, 1½ miles southeast of Pantano Oil Company and Speed Drilling Company's Harding 1, which blew out last year from 7840 feet, catching fire and cratering.

The new producer, first to be successfully completed in this area, is bottomed at 6805 feet, with 7⅝-inch casing perforated at 6668-83 feet with 20 shots. It cored oil, gas and distillate sands at 6825-40 feet and 6666-83 feet.

At last reports the well was flowing several million cubic feet of gas and spraying 3 barrels of distillate per hour through ⅜-inch choke, showing 1250 pounds on tubing and 1275 casing pressure. It is not fully completed.

Same operator is near contract depth of 8000 feet in McDougal 1, Lot 223, La Blanca tracts, 1 mile south of the Harding blowout. It showed a number of sands in the Frio horizon and indicates a producer in at least one of

them. It likely will make production tests in all horizons.

Howard Bass opened a new shallow gas area 5 miles northeast of Rio Grande City in Starr County through the completion of Hayden et al 1, which is estimated at several million cubic feet through perforations at 1305-08 feet. Closed in pressure is 550 pounds. The well had drilled to 1444 feet, after showing both oil and salt water in the Rio Grande City sand. It then plugged back to complete as a gasser in the upper portion of that horizon. The well is in the south half of Block 4, Share 47, Porcion 80.

About 15 miles farther northeast, F. Davenport and Trans-Western Oil Company's T. B. Slick Estate 1, Section 485, is fishing at 5607 feet. This well had a sand section from 5571-83 feet showing gas, shale break to 5589 feet, and oil and gas sand from 5589-5607 feet. This horizon, in the upper Jackson, gives promise of production, and a test likely will be made as soon as the fishing job is completed.

Sun Oil Company's J. F. Orr 1, M. Gonzales Survey, 4½ miles south of the Cuevitas field production, also in Starr County, drilled to 3517 feet, set casing at 2500 feet, and is testing. Casing was perforated at 2219-35 feet.

Several miles northeast of Rio Grande City, Moss & Heard's S. B. Ricaby 1, in Porcion 83, is waiting on cement after having 7-inch casing set at 1307 feet. It is in oil sand at 1308-20 feet. Should it develop oil production, it will open another shallow producing area for this portion of Starr County.

Extending Samfordyce

E. A. Graham is extending the northwestern portion of the Samfordyce field 1500 feet farther north into Starr County, and at the same time is materially widening the Barlow sand production. It cored this horizon at 3017-22 feet, but drilled to 3076 feet, where casing was landed. It will attempt completion through perforations.

Willacy County is expected to receive several deep tests within the near future. Shell Petroleum Corporation and associates plan further development of their 7600-foot La Sal Viejo field, while Ruez & Morton Inc. is rigging up on F. Armendiez 1, in the San Juan de Carricitos Grant, the well projected to 7500 feet or below.

HEARING ON SEGNO

Drilling rules of field to be based on evidence

Austin, Texas.—The Texas Railroad Commission has announced that a hearing on the Wing (Segno) field in Polk County will be held in Austin on January 14. At this time the commission will hear evidence upon which will be based rules for the spacing, drilling, completion and operation of wells in this field.

J. K. Dorrance et al's Wing 1, discovery well in the field, was brought in December 24. A potential test showed the well produced 250 barrels per day of 40.5 gravity oil. Dorrance set 120 feet of surface casing and 5150 feet of oil string. He reported the top of the sand at 5156 feet and the well was drilled to 5194 feet.

Texas Coast Quiet

SEVERAL TESTS ARE DUE BUT CURRENT EVENTS DISAPPOINT

WEEKLY STAFF REPORT

Houston. — Developments in the Texas sector of the Gulf Coast last week were characterized primarily by disappointments put on record and by log book notes indicating those looking for new fields and sands would have to wait another week. Several important tests, including some presaging commercially productive areas and sands, are scheduled for the coming fortnight, but the week just closed was conspicuous for lack of major revelations.

Production Test Soon at Lochridge

Approximately a half mile southeast of the discovery well at Lochridge field, Brazoria County, Gulf Oil Corporation's Gibson 1, showed oil on an electric logging device from 6352 to 6358 feet and were reported to be running seven-inch casing for a production test. The same operator's Reiss 1 was drilling in shale below 6820 feet below the regular producing horizon. A gas sand was encountered around 6720 feet.

Bunte Oil & Gas Company's Fite 1, D. Talley Survey, Brazoria County, was drilling in shale at 6503 feet and was reported to have encountered a gas sand at 6437 feet. The wildcat is running higher structurally than other wells drilled in the area and is being watched with much interest.

On the northeast side of Hastings field, Brazoria County, Humble Oil & Refining Company completed Graham Allen 1, B. B. B. & C. Survey, at 6125 feet after perforating casing with 12 shots from 6026 to 6035 feet. The test made 20 barrels of 31.1 gravity oil per hour through a quarter-inch choke with a tubing pressure of 640 pounds.

Green Lake Again Disappoints

Another failure for Sun Oil Company at Green Lake field, Galveston County, was reported at the end of the week. Hughes 5, W. Baker Survey, cored salt water sands and was abandoned at 6068 feet. A location for Hughes 6 was made by Sun Oil Company, 2799 feet northeast of Hughes 4 along line parallel to the northwest line of the W. M. Scott Survey.

South Houston field, Harris County, was defined on the east side last week when Tysco Oil Company abandoned Cristy at 5020 feet after failing to find anything encouraging.

Stanolind Oil & Gas Company abandoned Pittman C-2, Unit No. 6, H. & T. B. Survey No. 6, South Houston field, at 4054 feet in the Miocene formation.

Anahuac field, Chambers County, was defined on the northeast side last week when Gulf Oil Corporation abandoned Acom 1 at 7230 feet. Several salt water sands were cored.

Producer on Anahuac Flank

On the northeast flank of Anahuac field, Chambers County, Gulf Oil Corporation completed Wilcox 1, H. & T. C. Survey, Section 48, at 7079 feet, flowing 681 barrels of 35.1 gravity oil daily through a quarter-inch choke. Tubing pressure was 1180 pounds and casing pressure was 1150 pounds.

In the same area Humble Oil & Refining Company made a producer out of Johnson 5, H. & T. C. Survey, Section 47. The well made 18 barrels of 34.4 gravity pipe line oil per hour from 7120 feet through a quarter-inch choke. Casing pressure was 900 pounds.

In the northern sector of Anahuac, Humble Oil & Refining Company completed White 19, J. McGahey Survey, flowing 15 barrels per hour through a quarter-inch choke from 7138 feet.

Laverne Decker's Johnson 1, north-

TEXAS GULF COAST

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Humble, Phelan 2	576	6878
ANAHUAC—		
Gulf, Wilcox 1	681	7079
Humble, Johnson 5	432	7120
BLUE RIDGE—		
Harry B. Gordon, Blakeley 1	*	4278
CLAY CREEK—		
Sun, Freeman 4	¶1½	1455
CLEVELAND—		
Gulf, Kirby C-16	20	5861
COTTON LAKE—		
Glenn H. McCarthy, Kilgore 9	*	lcn.
DAMON MOUND—		
John McClardy 2	*	932
ESPERSON—		
General Crude, Moores Bluff 22	216	2315
FANNETT—		
Gulf, Burrell 11	295	4055
GREEN LAKE—		
Sun, Hughes 5	*	6088
HASTINGS—		
Humble, Graham-Allen 1	480	6035
NOME—		
Sun, Paggi 4	475	6055
SOUTH HOUSTON—		
Tysco Oil Co., Christy 1	*	5019
THOMPSON—		
J. M. Hayzor, Grimes 1	*	5411
TOMBALL—		
Humble, Holderrieth 6	552	5567
VAN VLECK—		
Skelly, Cobb B-11	460	7900
CHAMBERS COUNTY—		
Laverne Decker, Johnson 1, ne of Anahuac, T&NO sur, sec 30	*	7664

*Failures; †Junked; ¶Million cu. ft. gas.

east of Anahuac, T. & N. O. Survey, Section 30, was abandoned last week at 7664 feet. A slight show of gas was encountered from 7181 to 7206 feet and salt water sand was was logged in the Frio formation from 7420 to 7450 feet.

Amelia Is Extended

Amelia field, Jefferson County, was extended one location south when Humble Oil & Refining Company completed J. H. Phelan 2, C. Williams Survey, flowing 24 barrels of 29 gravity oil per hour with a tubing pressure of 650 pounds and a casing pressure of 700 pounds from 6878 feet.

East of production at Silsbee, Hardin County, Republic Production Company made a drill stem test on Brooks 4 from 6760 to 6840, upper Cockfield. The test showed 400 pounds gas pressure in six minutes. At the end of the week the crew set seven-inch casing at 6976 feet in the lower Cockfield sand and were waiting on casing to set before making a production test. No drill stem test was made of the lower Cockfield sand, but an electrical logging device was run.

Republic Production Company made location for Brooks 6, 933 feet south of Brooks 3.

Swab Polk Test

Approximately 4000 feet east of the discovery well at Ace, Polk County, Peyton Brother's Kirby & West 1-B, J. S. Thomas Survey, was swabbing oil and gas cut mud and showing a 1000-pound pressure at the end of the week. Casing was perforated between 4862 and 4867 feet.

Another producer was completed in Van Vleck field, Matagorda County, last week by Skelly Oil Company. Cobb B-11 was plugged back to 7900 feet from 8258 feet and 2½-inch tubing was hung around 7881 feet. The well came in making 460 barrels daily through a quarter-inch choke, with a tubing pressure of 600 pounds and a casing pressure of 100 pounds. It is in the M. Cummings Survey.

COMPLETING LINE

New Magnolia unit from Tilden to Corpus ready

San Antonio.—Magnolia Pipe Line Company expects to start running crude through its new pipe line from Tilden station in the northern portion of the Mirando district to Corpus Christi. Two crews are working on the project.

The line is being constructed by Mitchell Construction Company of Dallas, G. Blakely being in charge of the work.

It is an eight-inch welded proposition. Cast iron pipe with a pressure test of 1200 pounds is being laid through the black land sector, referred to as "crawling ground." Other interesting features of the line are the precautions being made to prevent corrosion. Tests are being made of all soil through which the line is being laid, the purpose being to determine the mineral content and decide the proper types of treatment to prevent corrosion.

Sets New Record

TEXACO'S RIGOLETS 5 FLOWS 1636 BARRELS FROM 10,244 FEET

Lake Charles.—To The Texas Company goes the honor of having completed December 7 the deepest, commercially producing, natural flowing well in the world.

Rigolets 5, Section 29-17s-24e, a south flank test of Lafitte field in Jefferson Parish, Louisiana, was completed at 10,244 feet for an initial production of 1636 barrels through a ⅜-inch choke. Back pressure was 1500 pounds, and the oil 34.6 corrected gravity.

Rigolets 5 is the tenth producer for Lafitte field, located 30 miles south of New Orleans. The well cemented a string of 7⅝-inch casing on bottom and perforated for the production test. Sands showing oil were logged at 9685 feet and from 10,058 to 10,064 feet. Tubing, 2½-inch, was run to below 10,000 feet.

The Texas Company's R. C. Milling 1, Section 20-17s-24e, northeast of the producing limits of Lafitte field, was testing at 10,040 feet after having logged clean oil sand at 9941 feet.

New Sand at Jennings

A new oil sand was discovered on the southwest flank of Jennings field, Acadia Parish, last week when Superior Oil Producing Company completed Jennings Heywood 1. The well was drilled below 6520 feet, and casing was perforated with 60 holes from 6460 to 6520 feet. The yield was 540 barrels of 39.8 gravity pipe line oil daily through a 14/64-inch choke with a tubing pressure of 1200 pounds and a casing pressure of 1250 pounds. After completing Jennings Heywood 1, Superior Oil Producing Company made location for Iowa Jennings 1, 95 feet south and 700 feet east of the SEc NE of Section 42, being in Section 41-9s-2w.

The Texas Company is drilling another 10,000-foot test in the Louisiana Gulf Coast. State Vermillion Bay 1, in Vermilion Bay, 16s-5e, Iberia Parish, the eleventh Louisiana test to pass 10,000 feet, was drilling ahead below 10,115 feet at the close of the week.

South of Baton Rouge in East Baton Rouge Parish, Louisiana, Crusaders Oil Company abandoned L.S.U. 1 at 7260 feet after recovering salt water on a test. L.S.U. 1, University Block prospect, Section 65-7s-1w, cored a sand with a slight showing of oil from 6454 to 6462 feet but upon testing this show it made salt water and mud.

Humble Oil & Refining Company's Wilbert 2, Bayou Blue, Section 74-9s-10e, Iberville Parish, was abandoned at 1534 feet after the well blew out while making a drill stem test. The test was made from 1524 to 1534 feet and showed a 200 pound pressure through two quarter-inch chokes. After the crew had pulled seven thribbles out of the hole the test blew out. The company lost the rest of the drill stem and the derrick was ruined.

Two Prospects Will Be Drilled

Two new wildcat locations were announced in the Louisiana Gulf Coast last week. Magnolia Petroleum Company will drill another well on the Johnson Bayou prospect in Cameron Parish. J. G. Grey Estate 1 is 330 feet north and 330 feet west of the southeast corner of the Grey 65-acre tract in Section 8-15s-14w. D. & D. Oil Company made a location on the Northwest Starks prospect in Calcasieu Parish. Lutcher Moore Lumber Company 1 is 330 feet north and 330 feet west SEc W½NE of Section 1-8s-13w. Northwest Sparks prospect is reported as a torsion balance prospect discovered by Humble Oil & Refining Company.

On the northwest side of Tepetate field, Acadia Parish, Continental Oil Company's O. Young 1-A, Section 29-7s-2w, was flowing into burning pits at the end of the week from oil sands at 8307 to 8318 feet. Top of the gas sand was logged at 8298 feet.

Tepetate appeared defined on the southwest side last week when Continental Oil Company failed to encounter oil sand in Homeseekers D-1, Section 29-7s-2w, at 8342 feet. The well will be plugged back and sidetracked.

Continental Oil Company was preparing to make a production test on Hebert 1, Abbeville prospect, Section 20-12s-3e, Vermilion Parish, at the end of the week. After setting five-inch casing to 11,795 feet a leak in the casing was found. It was recemented with 600 sacks of cement.

South of Abbeville, Stanolind Oil & Gas Company ran an electrical logging device to 10,570 feet after drilling to 10,850 feet.

Herton Oil Company completed an-

SOUTH LOUISIANA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BAYOU BLUE—		
Humble, Wilbert 2	*	1534
EAST HACKBERRY—		
Union Sulphur, Vallery 3 (wo)	380	3981
GILLIS—		
Union Sulphur, Lyons 1	*	lcn.
IOWA—		
Shell, Heyd 6, (wo)	160	4464
JEANERETTE—		
Herton Oil Co., Carter 3	450	6731
JENNINGS—		
Superior, Jennings Heywood 1	540	6520
LAKE PELTO—		
Texas Co., Lake Pelto 15	145	5465
ROANOKE—		
Humble, Thomas 3	520	8692
SORRENTO—		
Pan American, United Lands 7	*	5626
EAST BATON ROUGE PARISH—		
Louisiana Crusaders Oil Co., L.S.U. 1, University block, 67-7s-1w	*	7260
LA FOURCHE PARISH—		
Pan American, Harange 1, Valentine dome, 7-17s-20e	480	6977

*Failures; †Junked; ¶Million cu. ft. gas.

other well at Jeanerette field, St. Mary Parish, last week at 6731 feet when Carter 3 came in making 450 barrels of 35.6 gravity oil daily through a quarter-inch choke. The company's Banta 6, Section 40-13s-9e, was running casing to 6781 feet to test a sand showing oil from 6773 to 6781 feet.

Another Sand at Lake Pelto

A new producing sand was found in Lake Pelto field, Terrebonne Parish, by The Texas Company's State Lake Pelto 15, which was drilled to 7160 feet before setting 7⅝-inch casing at 5680 feet. Casing was perforated from 5420 to 5465 feet and the well made 145 barrels of 35.8 gravity oil. Tubing pressure was 110 pounds.

122 TEXAS PERMITS

Austin.—The Railroad Commission approved last week 122 permits to drill new wells in Texas, which was 133 below the number allowed the week before.

West Texas led the list of districts with 31 locations. There were 3 in the Panhandle.

Gulf Coast operators list 25 permits, and there were 24 from Southwest Texas, which included 13 from Duval County. West Central Texas reported 23 new locations, with 11 in Shackelford County, and there were 13 from the North Texas fields.

East Central Texas listed 3 permits, and there were none from the East Texas field proper.

Still Southwest

TWO WELLS IN CASS COUNTY ADD MORE RODESSA TERRITORY

NORTH LOUISIANA

WEEKLY STAFF REPORT

Shreveport.—The southwest limits of the Rodessa field in Cass County (Texas), was extended slightly over one mile last week with the completion of two wells, opening much additional territory to exploration along this fault. Further development in this end of the field had been awaiting outcome of these operations.

Three quarters of a mile outside of production, Hoffman & Marr completed Davis 1, J. S. Smith survey, at 6015 feet with initial production yield of 25 barrels hourly on ⅜-inch choke. Slightly over ¼-mile on westward, W. F. Lacy's Lewis 1, H. Holbert survey, bottomed at 6087 feet, was swabbing after flowing oil for a short time by heads.

Thirteen miles southwest, in Marion County, north of Jefferson, Holcomb & Thomason and Flesh & Hootkins' Lizzie Henderson 1, R. Bennington survey, prepared to set 7-inch casing on bottom at 6072 feet (corrected) after running 10-inch pipe to approximately 2175 feet. The well, which had good show of gas and distillate on test at 5990 feet, will core ahead after 7-inch is set to test the two lower Rodessa pay levels.

In the Lodi area of Marion County, 5 miles southwest of production, Arkansas-Louisana Gas Company was below 3550 feet in W. S. Ford 1, Charles Grayson survey. On top of chalk, well was reported checking with Holcomb et al's Jefferson test, 8 miles southwest.

Texas Allowable

In announcing individual allowables for wells on the Cass side of Rodessa under the new acreage-bottom-hole-pressure basis proration order, Texas Railroad Commission set the acreage factor at 6.785551 barrels to one acre and bottom hole factor of .4952289.

Total allowable for January was set at 32,175 barrels with 2,484.55 acres allotted to oil wells. Average bottom hole pressures according to the commission's contour map showed to be 2381 pounds, with the gas waste limit on 133 wells set at 62,632,000 cubic feet and 10 high-gas oil wells set at 4,706,000 cubic feet.

Ten Completions

There were 10 completions last week in the Rodessa district, all except one

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (La. Side)—		
Phillips Pet. Co.'s Interstate 2, 16-23-15	900	6129
CASS COUNTY (Texas Side)—		
American Liberty Oil Co.'s White-Walker 1, J. H. Rives sur.	1000	6032
Hoffman & Marr's Davis 1, J. S. Smith sur	1000	6016
W. F. Lacy's Lewis 1, H. Holbert sur	*	6087
Phillips Pet. Co.'s Farrier 2, W. R. Meyers sur	1000	6048
Skinner 2, S. F. I. W. Co. sur.	1500	6100
United Gas' Bibby Unit 2, A. Archer sur	1000	6050
Jones 9, B. J. Murray sur.	1500	6030
Rambo 8, J. Davenport sur.	1000	6009
Tyson A-4, J. H. Rives sur.	1000	6035

*Failures; †Junked; ¶Million cu. ft. gas.

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Valley—Turnertown—Greggton—Houston

being on the Cass County side. As the week closed there were 59 active tests underway on the Texas side and 13 underway on the Louisiana side.

The Sligo gas area of Bossier Parish where oil production has been found recently by two wells in basal Glen Rose and three other wells are now seeking, United Gas Public Service Company staked location for Skannal H-1, NE SE 26-17-12, ⅝ mile southeast of the discovery oil well. Skannal G-1, second oil producer for the district on late gauge last week made 565 barrels net oil through ½-inch choke. The discovery well averaged about 100 barrels daily.

Threatens Blowout

G. H. Vaughn Production Company's Sample 1, Section 24-11-14, Trinity test in the old Spider district of DeSoto Parish, claimed some attention late last week as operators were forced to increase weight of mud when it tried to blow out at 4480 feet. With elevation of 254 feet, top of first anhydrite was logged at 4305 feet.

Luther Swift et al's Long Bell 1, Section 11-8-14, closely-watched Sabine Parish wildcat, 5 miles southwest of production in the Converse field, was abandoned last week at 3422 feet in top of the Lower Cretaceous. Four hundred feet east of their junked Whitney 1, deep test in Section 8-9-13, in the Converse field, Whitehurst & Cox last week were clearing location for a new test. At 5503 feet in Glen Rose lime, where it was junked, well blew out of control several times showing much gas and some oil.

Standard Oil Company was drilling ahead in Fudicker 1, Section 2-17-9, Webster Parish, toward the Travis Peak after finding only gas and distillate in the Glen Rose zone from which three wells are producing in the new Sibley area, 1½ miles northeast. If no production is found from Travis Peak, it will plug back and complete as an extension of the Sibley area.

New Deepest Hole

A new drilling depth record for the Shreveport territory was established last week by Gulf Oil Corporation's Rhymes 15, Section 32-17-6 in the Richland gas area of Richland Parish as it drilled ahead below 8795 feet. It passed the depth record of United Gas Public Service Company at Darrett 2, in the Sugar Creek field of Claiborne Parish, which went to 8616 feet.

The new field discovery at Lisbon, Claiborne Parish, of E. T. Oakes et al, Patton 2, Section 1-20-5, continued its flow last week. On late gauge it made 87 barrels during 24 hours on 9/64-inch choke. Total depth is 5379 feet in basal Glen Rose. Trading continues active around the well but no new operations have been announced.

Deeper Gas at Cotton Valley

A new and deeper producing horizon for the Cotton Valley field of Webster Parish was opened last week with the completion of Ohio Oil Company's Bodcaw No. 1, NE SE Section 28-21-10, as an estimated 75 to 100 million foot potential open flow gasser with estimated 250 to 300 barrels of distillate daily.

Bottomed at 8186 feet in about 25 feet of saturated sand in the lower Marine section, below the Travis Peak

CONTROL WELL

El Dorado, Ark.—Clyde Cox et al's Haynie 1, Section 5-14-20, 1¾ miles northwest extension of the new Troy field of Nevada County, was placed under control last week and efforts started to complete well after it ran wild for two days making estimated 20 million cubic feet of gas and some oil from Nacatosh sand at 1170 feet. Some salt water was reported showing with the flow of gas and oil.

There were no new locations nor completions reported last week in Arkansas.

GEORGIA BLOCK

Atlanta, Ga.—H. L. Sitchfield and Kennith Mix of Tate, Georgia, have leased 75,000 acres in Clinch County, south Georgia, and are expecting to shoot the block by February 15. If favorable results are shown by the geophysical work, they will drill a deep test. During the past two months, two seismograph crews have been working in southeast Georgia for Oklahoma companies.

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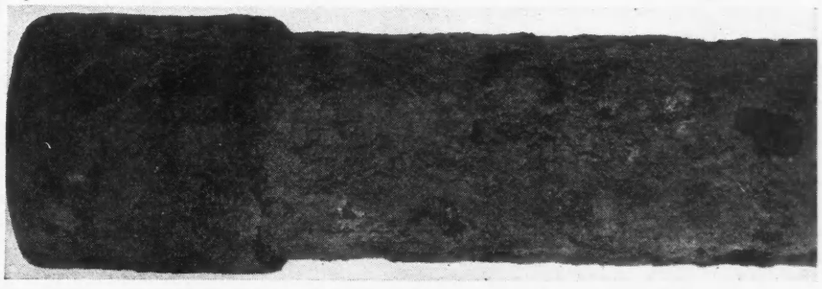

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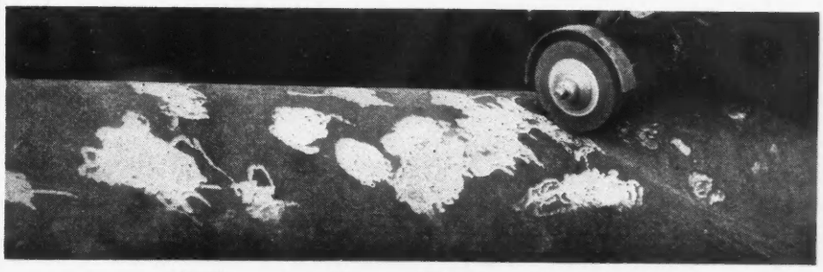

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which was added as a producing horizon in this territory last year, the well now takes the rank as North Louisiana or Arkansas' deepest producer.

In the meantime, same company was awaiting arrival of casing for Coyle 1, Section 23-21-10, 1¾ miles northeast, at 8177 feet, with 33 feet of saturated sand reported taken in. Of four other wells now drilling in the area, deepest was Magnolia Petroleum Company's Cox 1, Section 23-21-10, drilling below 7968 feet.

Previously, the deepest producing well in this area was Lide, Greer & Marr's Gardner 1, Section 10-17-4, Lincoln Parish, at 6576 feet in Travis Peak, one of two producers in the new area.

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ROCKY MOUNTAIN LACKING RESULTS, BUT TESTS DEEPEN

ROCKY MOUNTAIN FIELDS

WEEKLY STAFF REPORT

Casper, Wyo.—Ohio Oil Company is pushing its exploration of the Jay Em area in Goshen County, eastern Wyoming, at top speed. The company is drilling water wells for Red Cloud Cattle Company 1, NE NW 28-29n-62w, and is moving in equipment from its Joseph A. Waggoner 1 well, C NE NE 14-28n-63w, which was abandoned three weeks ago when it drilled into granite at 3052 feet. The new well is located about 6 miles northeast of the abandoned location and represents another stage in the drill exploration of the territory.

In the Lance Creek field, Niobrara County, Ohio Oil Company has completed Agnes Rohlff 4, C SW NE 32-36n-65w, for 93 barrels daily on final test. The fluid showed 85 barrels of oil and 8 barrels of water on the test. The basal Sundance was encountered at 3864-3964 feet, and hole bottoms in the red beds at 3969 feet. The well was first completed several weeks ago for an initial production of 40 barrels and the company has been running wall scraper to increase production. The well has had 7-inch liner set at 3964 feet.

Complete Lance Creek Well

Continental Oil Company's Schuricht 2-B, SE SW NE 6-35n-65w, Lance Creek field, has been put on production. The well was completed for 250 barrels of fluid, 33 percent water, in the first 24 hours. Located on the south end of the field, the well may indicate the southern limits. It was drilled to 4065 feet and encountered water. The well was then plugged back to 4000 feet and completed. The company's Schuricht 5-A, C NW SW 5-35n-65w, is drilling at 2185 feet.

An outside location to the northeast of the nearest producing well in the Lance Creek field, Argo Oil Company's Ford 3, SW NW 33-36n-65w, is drilling at 3133 feet. The well logged the top of the Muddy sand at 3100 feet.

On the west side of the Lance Creek field, J. M. Huber Corporation's Joss 2, NE NE SW 6-35n-65w, is swabbing in. Depth is 3982 feet in the third Sundance sand topped at 3973 feet. The well recovered saturated cores from this depth. Upon completion of this well the company will move rig and equipment to its Midwest 1, SE SE SW 27-33n-65w, which the company has contracted to deepen to the Sundance horizon by March 1. The well is an old gasser originally completed in the Dakota in 1925 for 50,000,000 cubic feet of gas. Later it was deepened and recompleted on the Dakota formation where it showed some 7,500,000 cubic feet of gas and a small show of oil rated at around 20 barrels daily.

A. B. Cobb and the Holly Development Company's Nat Novick 1, NE SE SW 6-35n-65w, is running by-collar to recover whipstock and drill ahead from 3578 feet.

North Wyoming Wells Progress

Developments in the Byron and Garland fields of the northern part of the state of Wyoming were showing considerable progress for this week. The Badger Basin field in Park County, northwestern Wyoming, also showed a good completion for the week.

Resolute Oil Company's State 1, C NW SW 16-57n-101w, in the Badger Basin field, was brought in for 200 barrels initial from the Frontier sand at 8440-55 feet. Depth of the well is 8654 feet. Completion of this well was delayed for several weeks as the result of a fire which destroyed the rig and considerable machinery just before a production test of the well could be made. The lease has been cleaned up and the rig rebuilt.

In the Byron field, Big Horn County, northern Wyoming, Ohio Oil Com-

MOUNTAIN STATES Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
GLACIER COUNTY (Cut Bank Field)—		
Drumheller Reservation Synd., Tarrant 1, csw sw 21-34-6w	(a)	3155
B. V. Hole, Allotted 2-124, cnw se 1-32-6w	40	3074
Pardee Drilling Co., Morrison-Meade 2, sec se ne se 23-33-6w	(a)	2892
YELLOWSTONE COUNTY (Mosser Dome)—		
R. C. Tarrent, Sayre 1, nw nw se 26-3s-24e	100	1036
WYOMING		
BIG HORN COUNTY (Garland Field)—		*
Stock Oil Co., Griffin 1, ne ne ne 4-55n-97w	400	4200
CARBON COUNTY (East Allen Lake Field)—		
Medicine Bow Oil Co., Hintze-Government 1, cne sw 18-22n-78w	¶25	2058
COLORADO		
WELD COUNTY—		
Continental, Briggs 2, cne sw 13-6n-61w	*	7042

(a)Not gauged; no market.

*Failures; †Junked; ¶Million cu. ft. gas.

pany's Clarrissa Willey 1, NE NE NW 25-56n-97w, swabbed 120 barrels oil first 10 hours and shut down for tankage. Production in the well is from the Embar-Tensleep, with the top of the Embar at 5223 feet and 7-inch production casing set on top of the Tensleep at 5250 feet. Operators are now erecting additional tankage on the lease preparatory to making a production test of the well.

Ohio Oil Company's State 1, NEc 35-56n-97w, Byron, is drilling at 4069 feet.

Sidney H. Keoughan and the Taylor Oil Company's Robinson 1, SW SW NW 24-56n-97w, in the Byron field, is still shut down at 2890 feet for boiler repairs.

Gas Flow Decrease

In the Garland field, Big Horn County, northern Wyoming, Stock Oil Company is reporting definite signs of a decrease in gas flow from company's Allen 1, SE NW 35-56n-97w, which has been running wild at the rate of 60,000,000 cubic feet of gas daily for nearly a year. The company drilled a directional hole from a point 190 feet northwest of the wild well and has been pumping water through the directional hole under 8000 pounds pressure for the past week. The gas flow is coming from the Embar-Tensleep at 3838 feet, while the directional hole is bottomed at 3800 feet. The fire in the crater of the blazing gasser has been choked out and a noticeable decrease was seen in the gas flow. The water has started returning through crater with mud, and it is believed that the crevice formation feeding the wild well has been at least partly plugged off. When the gas flow is brought under complete control the formation will be cemented off and the hole closed to prevent further pressure loss.

A near completion for the Garland field was seen this week as Ohio Oil Company's Smith 2 swabbed 336 barrels the first 24 hours. Operators have set 5¾-inch production casing on top of the Madison at 4070 feet, from which saturated cores were recovered, and are rigging up pumping equipment for a production test. Depth of the hole is 4201 feet in lime.

Colorado Work Slows Down

Developments in the Tri-State basin area, in which Mountain Fuel Supply Company has been particularly active during the past season, were slow this week, as that company shut down all but one of its wells for the winter.

On the new Powder Wash field, Moffat County, northwestern Colorado, the company's Hal Stewart 1, C SW 31-12n-24e, is drilling at 1925 feet. The well is a northeast offset to the discovery well on the field, which completed for 1500 barrels of oil initial last November, marking one of the largest oil strikes for the Rocky Mountain region for the past year.

On the Dry Mountain structure, also located within the Tri-State basin, Phillips Petroleum Corporation and Anderson-Kerr Drilling Company's joint test of the structure is getting under way. The test is located C SE SE 19-9n-99w, in Moffat County, about 20 miles southeast of the Powder Wash field. Operators are moving in material for the new well.

Freezing weather caused the suspension of Henderson Producing Company's test of the north extension of the Carbon County, Montana, side of the Elk Basin field. The well, Elk 1-H-11, SE SE NW 35-9s-23e, will probably resume drilling operations around the first of March. The Elk Basin field extends from Carbon County, Montana, south across the state line into Park County, northern Wyoming.

Hidden Dome

Two completions, one of which was a failure, and a near completion marked the activities of the Hidden Dome field, Washakie County, north central Wyoming, this week.

Wyoming Oil & Refining Company's Government 5, NW NW 31-48n-91w, was completed for a flow of 30 barrels during the first 24-hour test from a depth of 1545 feet. Production is from the Frontier formation.

Christiansen & Thorne chalked up a failure as Government 3 was abandoned. The well was located SW SW 31-48n-90w.

After encountering a good show of oil at 1831 feet, Wood-Callahan Oil Company Ltd. has set 8¼-inch oil string at that depth and is preparing to drill in Government 1, SE NW 25-48n-91w. The well is an outside location, considerably to the northwest of other oil producing wells in the field.

Montana fields showed good progress for the week, with Daniels Petroleum Company's May 1, C SE SE 13-1s-33e, reporting a good oil show in the Tensleep at 3840 feet, where it is shut down and preparing to run casing before drilling in for a production test. Operators are drilling the well as a deep test of lower formations underlying the Hardin Gas field, Big Horn County, southern Montana.

In northern Montana, Western Natural Gas Company's Wallace 2, NW NW SW 15-37n-4e, on the Whitlash field, Liberty County, is drilling at 1859 feet.

SINCLAIR BID WINS

Will take government's Salt Creek royalty oil

Washington, D. C.—Execution of a contract under which the Sinclair Wyoming Oil Company will purchase all Government royalty oil from the Salt Creek, Wyoming, field for a period of three years from January 1, 1937, was announced January 5 by Secretary of the Interior Harold L. Ickes.

Three Bids

Bids for the purchase of the oil were opened December 1, three proposals being submitted, Sinclair Wyoming Oil Company offering a premium of 2½ cents per barrel above the highest field price for oil of equal or lower gravity produced in the field as published or offered on any basis of tank measurement reported in terms of capacity tables of not less than 97 percent by the principal purchaser of oil in the field, or if the highest field price for oil in Oklahoma and Kansas as similarly published or offered by at least two of the five principal purchasers be higher

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for oil of equal or lower gravity than the highest price for the Salt Creek field, then at a premium of 2½ cents per barrel above the higher price. A surety bond in the sum of $200,000 has been filed for full and complete compliance with the terms of the contract. Explaining that every effort was made to obtain the highest possible price for the oil, Secretary Ickes pointed out that the bonus is higher than the bonus of 2 cents received under the 1934-36 contract with the Sinclair Wyoming and Socony-Vacuum companies.

"It may reasonably be anticipated," he said, "that stabilized conditions in the petroleum industry at the close of 1939 and the reduction of supplies now held in storage by private parties will enable the Government to dispose of its royalty oil at a higher price after January 1, 1940."

Proposals for the purchase of royalty oil accruing to the Government from leases on Government lands in the Lance Creek oil field, Wyoming, for a period of three or five years beginning April 1, will be opened by the secretary of the interior February 15, it was announced by the Department of Interior January 6.

Only a small amount of oil is involved, the total Government royalties from the field being 33,664 barrels for the calendar year 1936, and for the first 10 months of 1936 approximately 5747 barrels per month.

Bids may be submitted to purchase the oil for either a period of three or five years. Proposals must be accompanied by a bond or certified or cashier's check or draft for $750, and the successful bidder will be required to furnish bond in the sum of $40,000 for full and complete compliance with the terms of the contract.

Deep Test Drills

VENTURA AVENUE WELL TO GO TO 10,500 FEET

WEEKLY STAFF REPORT

Los Angeles.—With the drill making fair progress at 10,243 feet, and with plans calling for a total depth of 10,500 feet before making a production test, Associated Oil Company's McGonigle 12 at Ventura Avenue may become the deepest producer of oil in the world. A string of 5¾-inch casing was cemented at 10,007 feet, and reports from the field indicate a fair core recovery, but formations now being penetrated are not thought to be over promising. This will be the deepest hole ever drilled at Ventura Avenue, which is known as a deep hole field.

Associated Oil Company also has another hole at Ventura Avenue, which is ready for a production test. This is Lloyd 131, which is bottomed at 9846 feet, with 8⅝-inch pipe cemented at 8541 feet. Total of 1352 feet of liner, all perforated, has been landed on bottom, and it will be swabbed shortly for a production test.

Abandon Inglewood Test

Another real deep test in Southern California, which had been the center of attention for several weeks, is Superior Oil Company's Inglewood Extension 1, which stopped at 9486 feet in the shist and has been abandoned. A few slight showings were reported in the lower portion of the hole, but when tested, they proved of no value.

One of the interesting tests in Kern County is Continental Oil Company's K.C.L. A1, in Section 8-27-24, which staged a blowout of gas cut mud, water and a spray of oil, with bottom at 7121 feet. Formation now being cored is hard sand and gas showings were noted on the ditch after passing 7100 feet. The blowout was threatened as the tools were coming out of the hole, and it was necessary to pump in heavy mud to gain control.

In the Ten Section area of Kern County, Shell Oil Company may soon complete its second producer in this new field. Its K.C.L. 34, Section 29-30-26, has reached 7820 feet in oil sand and string of 9⅝-inch pipe has been cemented at 7815 feet. Top of the oil sand was cored at 7812 feet in the discovery well, and as No. 34 is located some 1000 feet northeast of the first well, it is indicated the structure is comparatively flat, for that immediate area. Shell spudded another well December 28 in the same area, in Section 30-30-26, while Standard Oil Company is drilling its K.C. 9-1, Section 34-30-26, in gray sand at 8900 feet. Shell controls most of the best looking acreage in the new field.

In the San Emidio area of Kern County, Union Oil Company is preparing to make exhaustive geophysical study, and has started drilling at its Core Hole No. 1, in Section 34-11-22. In this same area I. L. Burch's No. 1, Section 31-20-23, was drilled to 2460 feet, and operations are closed down for the present.

Near Avenal in King County, Associated Oil Company's Avenal 2, Section 35-23-17, has stopped drilling at 1029 feet in oil sand and will set casing preparatory to a production test. The oil sand is of the brown sugar type, which indicates heavy oil, but it is quite probable the well will be a commercial producer.

Three New Greeley Tests

Standard Oil Company is planning to start three new tests on the new Greely field in Kern County, discovered and proven by a Standard well. The discovery well averaged 2485 barrels. The first day of the potential test, the discovery well made 2657 barrels of oil and 2,336,000 cubic feet of gas. On the second day of the test, the well made 2450 barrels of oil and 2,910,000 cubic feet of gas. On the third day, it made 2350 barrels of oil and 2,100,000 cubic feet of gas. The oil was 36.7 gravity, cut les than 2 percent. Flow was through one 96/64-inch bean with 230 pounds on the tubing and 1105 pounds pressure on the casing.

In the Gardena area in Los Angeles County, Standard Oil Company has abandoned Bodger 1, Section 22-3-14, with bottom at 8044 feet. The predominating formation throughout was shale with streaks of gray sand, last cores running largely to barren gray sand. Formation tester was run on all sand bodies of importance and recoveries for the most part was dead oil and a little gas. Many oil men had felt that maybe this area might be good for production, but this test is rather conclusive. In the same area, Universal Consolidated Oil Company's Carrell 1, in Section 36-3-14, is coring at about 7220 feet in shale with an occasional streak of sand. It is understood Universal will carry this well to 7400 feet, and maybe as deep as 7500 feet before considering its abandonment.

In the Palos Verdes Hills area of Los Angeles County, many have felt it was likely territory. Recently, Southern California Drilling Company took over a 400-acre lease in this area, and will follow through with a location made by another company in Section 36-4-14.

El Segundo Field

In the new El Segundo field in Southern California, Richfield Oil Company's El Segundo 1, discovery well for the field, continues to make a good showing. Last 24-hour gauge reported was 2030 barrels of 27.3 gravity oil, cutting less than one percent. Flow is through one 76/64-inch bean, with 100 pounds on the tubing and 1275 pounds on the casing. Four other wells are drilling in this general area. Since the discovery well was completed at 7435 feet, it is doubted if there will be any real developments until late in January, if then. Operators now busy in this new area include Ohio Oil Company, Republic Petroleum Company, Richfield Oil Company, Camino Company, and The Texas Company.

CALIFORNIA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
KETTLEMAN HILLS—		
Kettleman No. Dome, No. 52-34J	2940	7919
Kettleman No. Dome, No. 72-34J	2250	8150
FRUITVALE—		
Calif. Star Oil Co., Moore 2	200	4055
MIDWAY SUNSET—		
Associated, No. 61-A	15	1000
C. C. M. Oil Co. No. 24	230	2700
Texas Co., No. 17	110	3101
Union, Keene 4	550	1800
SANTA MARIA—		
Union, Squires 16	110	3571
MOUNT POSO—		
Ring Pet. Co., Bowles 29-1	*	1906
WILMINGTON—		
General Pet. Corp., Patton 1	447	3651
LOS ANGELES COUNTY—		
Standard, Bodger	*	8044
Superior Oil Co., Inglewood Ext. 1.	*	9486
ORANGE COUNTY—		
Calif. Eastern Oil Co., Verde 1	*	4750

*Failures; †Junked; ¶Million cu. ft. gas.

Michigan Fields Busy

GLADWIN COUNTY PRODUCER HOLDS CENTER OF INTEREST

WEEKLY STAFF REPORT

Mount Pleasant, Mich.—Initialing 154 barrels from 3605 feet, 71 feet in Dundee lime, J. V. Wicklund Development Company's State A-1, SW SW SE, 11-18n-1w, Gladwin County, jumped to 832 barrels on January 3 when deepened to 3612 feet and on the following day produced 1198 barrels from 3618 feet, where the semi-wildcat was temporarily bottomed.

Despite other important year-end discoveries and a record peak of winter activity in the state, interest swung to the Wicklund test and this area may become the center of development. J. V. Wicklund Development Company has closed contracts for 4 additional tests, 2 already staked, Mammoth Producing & Refining Company has moved in 2 rigs, McClanahan Oil Company has the west offset, Goll, Graves & Mechling are clearing 2 locations and Sun Oil Company, largest single acreage holder in the area, is starting a test and mapping plans for additional development.

Weather Will Rule

Development will, however, be in the hands of the weather man. Only dirt and sand roads and abandoned logging camp trails lead into the district which looms as the center of the early play. Michigan was virtually without snow this week but a normal snow might seriously hamper activity.

The Wicklund test, drilled on a 160-acre block leased from the state, is 4 miles north and 1 mile west of Goll, Graves & Mechling's Oard 1, Section 25 - 18n - 1w, Buckeye township, Gladwin County, which was brought into commercial production in September of 1936. The Oard although showing an unusual section of Dundee sand pay, and two other close-in tests which followed it, never showed much more than pump production.

The initial production of State 1 indicates a prolific Dundee pay zone with tank gauges showing as high as 62 barrels an hour. Based on other tests in the Gladwin district the Dundee section should range 150 feet thick or more before reaching the water table.

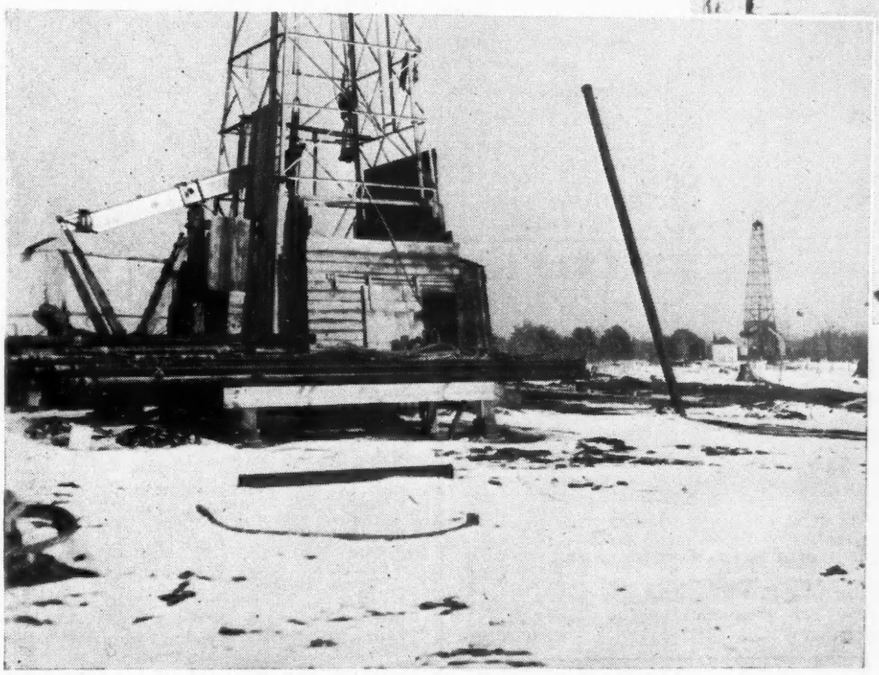
It is too early for geologists to label the well as an entirely new closure, although some evidence is at hand to indicate this possibility rather than an extension.

Interest in Other Areas

While interest was sharply focusing on Gladwin County, other areas also were reaching a more definite state. In Sherman township, 15n-6w, Isabella County, Pure Oil Company's Latham 1, Section 33, west offset to same company's Embrey 1 discovery, initialed 300 barrels from 3656 feet in Monroe lime and Pure Oil Company's Embrey A-1, Section 33, ½-

Gulf Refining Company's Kainder 1, section 10-20n-4e, Clayton township, Arenac County, where a 660-foot string of 10-inch casing was projected through the crown block, with 18 joints snapping off and falling like jackstraws around the lease. No one was injured. This photo shows a 2-joint section that speared 12 feet into frozen ground and stood like a javelin.

The photo at top shows the first joint 300 feet from the well where it landed along with other bent sections. The blow-out, first of its kind to happen in Michigan, blew an estimated 300 feet of casing completely out of the hole before it started to break and fall. It occurred when the Berea sand was being mudded to kill an 8 million-foot flow of gas at 1265 feet. The 10-inch had been set to temporarily shut off a water sand around 550 feet before running 8-inch through the Berea.



mile north of the discovery, initialed 425 barrels from Monroe lime at 3636 feet.

However, Pure Oil Company's Dutcher A-1, NW SW SE Section 28, ½-mile west and ¼-mile north of Embrey A-1, had Monroe water at 3719 feet with a failure in prospect.

The new North Vernon township (16n-4w) Isabella County district, opened in October with a 990-barrel initial Dundee well drilled by Chartiers Oil Company on Currie 1, Section 5, was fading in interest after two offsets and ½-mile north extension failed to show commercially.

The estimated total investment of $13,276,000,000 in the oil industry is apportioned among the various branches of the industry as follows: $5,665,000,000 in production; $270,230,000 in natural gasoline plants; $941,000,000 in crude oil pipe lines; $3,400,000,000 in refining; and $3,000,000,000 in marketing.

MICHIGAN

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ISABELLA COUNTY—		
Chartiers Oil Co.'s Wilson 1, c n½ ne ne 7-16n-4w	*	3900
J. W. McIntosh's Thayer 1, se sw nw, 23-16n-4w	75	3798
Pure Oil Co.'s Latham 1, ne ne se, 33-15n-6w	325	3656
Embrey A-1, ne ne ne, 33-15n-6w	420	3636
LENAWEE COUNTY—		
Withrow and Roger's Ross 1, se ne ne 23-6s-5e	*	2575
Socony Vacuum's Russell 1, c s s, 25-5s-5e	*	2577
MACOMB COUNTY—		
H. H. Brown's Kandt 1, c s se sw, 33-3n-13e	*	365
Heintz 1, 4-3n-13e	*	630
MECOSTA COUNTY—		
Gordon Oil Co.'s Church 1, c ne se 2-12n-7w	¶13	1280
OTTAWA COUNTY—		
Muskegon Dev. Co.'s Wolfting 1, se se ne 36-6n-15w	*	2015
OGEMAW COUNTY—		
Southern Pet. Co.'s Ellis 1, se se se 14-22n-1e	20	2750
Ogo Oil Co.'s Weir 1, nw ne sw 19-22n-2e	40	2773
Weber Oil Co.'s Boeing 1, ne sw se 36-22n-2e	35	2660
ROSCOMMON COUNTY—		
North Michigan's Hartwick 2, nw nw nw 31-24n-4w	*	3265

*Failures; †Junked; ¶Million cu. ft. gas.

EASTERN FIELDS

WEEKLY STAFF REPORT

Completions

OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ATHENS COUNTY—		
Snow, Brooks Johnson 1	¶	....
Ohio Fuel Gas, Sunday Creek Coal Co. 2	*	....
Carpenter & Glazier, J. Smith 5	*	....
A. D. Townsend & Co., J. H. Hartley 2	¶	1672
BELMONT COUNTY—		
Dyken, Shay McMullen 1	¶	....
COSHOCTON COUNTY—		
Kundtz Hulse Inc., McKee 4	90	....
Preston Oil Co., A. Underwood 1	¶	3131
GUERNSEY COUNTY—		
Cambridge Glass Co., Minnie M. Beers 1	4	1312
Minnie M. Beers 1	2	1318
HOCKING COUNTY—		
Nelsonville, C. L. Co. Kachelmacher Estate 3	¶	....
JEFFERSON COUNTY—		
C. S. Kelley & Co., Ella S. Baxter 14	2	1275
KNOX COUNTY—		
Knox Exploration, C. H. Simmons 1	40	3234
Ohio Fuel Gas Co., Lenard Stricker 1	¶	....
Palmer Beal 1	*	....
LICKING COUNTY—		
Ira Hazelett & Co., S. M. Guthridge 1	85	3108
Clay Bros., George Boyd 3	¶	2987
Penn Construction, W. M. Hillaman 2	¶	890
Murphy Oil Co., Martha A. Lynn 1	¶	2935
LORAIN COUNTY—		
Ohio Fuel Gas Co., Charles Schultz 1	¶	....
Ohio Fuel Gas Co., C. Schultz 1	¶	2810
MEDINA COUNTY—		
Ohio Fuel Gas Co., Matilda Fleck 1	¶	3488
MEIGS COUNTY—		
Bowman & Edgar Ervin, Jennie Jacks 3	*	742
Clyde Wine, Avery Roberts 1	*	1948
Goodfellows Co., Elias Jividen Estate 9	¶	1971
MONROE COUNTY—		
Ohio Fuel Gas Co., D. H. Phelps 2	*	1089
MUSKINGUM COUNTY—		
Ohio Fuel Gas, Hecle 1	¶	....
Albert Porter 1	¶	4039
William Cline & Co. Kilpatrick 1	*	....
NOBLE COUNTY—		
L. A. Patton, Mary Shilling 11	3	974
PERRY COUNTY—		
McClay Bros., Boyd 3	¶	....
Ohio Fuel Gas Co., Burl Cotteran 1	*	3007
Wehrle Co., George Shrider 2	¶2	2805
Preston Oil Co., William Lehman 1	¶	2960
Planet Oil Co., Thomas Vansickle 3	¶	2990
Ruth & Strong, William Nuzum 18	10	1044
SENECA COUNTY—		
J. H. Murphy & Son, J. J. Werling & Co. 1	*	....
F. W. Keiner, Homer Zimmerman 1	¶	....
G. O. Nightswander, F. W. Keiner 1	¶	....
Tiffin Industrial Gas, Frank Sherger 1	¶	....
SHELBY COUNTY—		
Royal Oil Co., Ben Barhorst 2	5	1295
STARK COUNTY—		
Ohio Fuel Gas Co., Eliz. Harmount 6	¶	4297
TUSCARAWAS COUNTY—		
Ohio Fuel Gas Co., B. J. Crowerths 1	*	5426
VINTON COUNTY—		
Kelch Bros, Lewis & Myrtle Buckner 5	1	842
WASHINGTON COUNTY—		
Henry Oil & Gas Co., D. B. Mullinex 2	*	1365
Ira H. Bosworth, Ben Andrews 1	1	976
Russ Heslop, S. S. Stewart & Co. 3	¶	1060
R. S. Cunningham, Bode & Thomas 1	*	1247

WEST VIRGINIA

Company, Well and Location	Init. Prod. Bbls.	Depth
CABELL COUNTY—		
De Jarnette, De Jarnette 2	¶	1426
Lusher & Lusher, Floyd Adkins 1	¶	3392
United Fuel Gas Co., Edawrd D. Meadows 4676	¶	3157
CALHOUN COUNTY—		
McIntosh & Co., Lloyd Yoak 1	¶	2650
Barker & Fowler, Cora C. Stump 1	¶	1925
GILMER COUNTY—		
West Virginia Utilities, J. T. Gerwig 3	¶	1777
KANAWHA COUNTY—		
West Virginia Gas Corp., Campbell & Mc Chatic 1	¶	3900
Columbian Carbon, E. Copenhaven 1	¶	4833
United Fuel Gas Co., H. C. Walker 4693	¶	....
G. L. Cabot, Inc., N. B. Tompkins 4	¶	5183
Robert Bibby 1	¶	5193
Columbian Carbon Co., Maggie Givens 1	¶	5084
United Carbon Co., Milam 1	¶	....
Pure Oil Co., William Coal Co. 265	10	....
LEWIS COUNTY—		
McCall Drilling Co., Rinehart 1	*	....
LOGAN COUNTY—		
Cole Boon Coal, Boone Co. 10	¶	....
MARION COUNTY—		
Carnegie Natural Gas Co., Hibbs 1	¶	....
MARSHALL COUNTY—		
G. B. & A. C. Patterson, Patterson 1	¶	....
RITCHIE COUNTY—		
Guy Flannigan, Pittsburg West Virginia 6901	¶	....
Cario Oil Co., Bogger Heirs 1	¶	....
ROANE COUNTY—		
A. Kee, L. C. Young & Co. 3	¶	....
WASHINGTON COUNTY—		
United Fuel Gas Co., Mohler Lumber Co. 4617	¶	....

KENTUCKY

Company, Well and Location	Init. Prod. Bbls.	Depth
HENDERSON COUNTY—		
Ranger Oil Co., C. M. Gish 200-ac 12	7	....
OHIO COUNTY—		
McGowen & Co., V. R. Ferguson 1	*	....
Mary B. Harden, James Ford 3	*	....
Petroleum Exploration, R. & H. Graham, 134-acres, 14	40	....
Alex Whitehouse, Henry Scholl 3	30	....
Cameron Heirs, Evans Jane Hunt 1	75	....
Kentucky Nat. Gas, J. A. Mitchel East, 95-acres, 4	50	....
O'Dell Heirs, Elvis Dehart & Co. 3	50	....
J. C. Miller & Co., Bethel Coppage 1	*	....
Bethel Coppage 2	*	....
McLEAN COUNTY—		
Major Oil Co. Hoffman Lot 1	*	....
Helt & Co., Lucy Davis Lot 1	10	....
Lion Oil Co., Bradshaw Lot 1	10	....
Greene River Coal Co., Ellis & Blowers 1	*	....
B. B. Oil Co., R. Rock 1	25	....
R. Rock 2	25	....
Nation Bros., Rough River Corp. 5	*	....
B. B. Oil Co., Homer Austin 1	*	....
L. Hoover, Bill Stevens 1	*	....
R. H. Rowan, Simpson Bros. 2	15	....

*Failures; †Junked; ¶Million cu. ft. gas.

NO LOST MOTION in NUT TURNING

with the **FAVORITE** Reversible Ratchet **WRENCH**

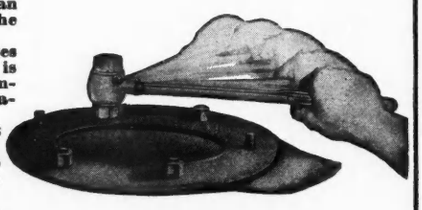
Many operations require the quick turning of nuts. This can be efficiently done with the "FAVORITE."

The wrench head encompasses the nut on all sides, so there is no danger of slipping, and damage to nut or injury to operator is avoided.

Opening in head allows bolt to pass clear through.

Each wrench can turn two different-sized nuts — one on each side of head.

Reverse motion instantaneous by turning pawl.



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THE OIL WEEKLY REPORT ON IMPORTANT *Wildcat Tests*

ARKANSAS

CLEVELAND COUNTY — J. R. Lockhart's Robertson 1, sw se 36-10n-11w, coring 3095 ft. last report.

DALLAS COUNTY—Walter Lown's Atkinson 1, ne nw se 7-10-13, claim so in sand sd cur titles td 2418 ft.

GRANT COUNTY—Wallace & Staples' Davis 1, se nw 23-5-15, tested sg in ds test sand drom 1861-69 ft. dr ahead 2183 ft.

HEMPSTEAD COUNTY—H. D. Easton et al's Conway-Tiller 2, sw sw 34-12-27, arr deepen 3005 ft. Root Pet. Co.'s Jones 1, sw ne 16-13-23, elv. 348 ft. top Nacatosh 595 ft. base chalk 1253 ft. top tokio 1613 ft. massive anhydrite 1891 ft. to 1977 ft. tested est 25,000 feet gas 2108-2113 ft. cored hard lime cap in Travis Peak 3299-3300. cored 10 ft. clean sand 3300-3310 ft. made dry ds test, coring ahead.

LAFAYETTE COUNTY — A. M. Neely's Meek 1, ne nw 35-19-25, sd 800 ft.

MILLER COUNTY—Joiner et al's Montana 1, nw nw 3-17-28. 7-in. csg. 5270 ft. tested sw, fishing 5278 ft. C. V. Lenz's Dale 7, 24-15-26, 7-in. casing 4280 ft. arr standardize, 3500 feet oil in hole. Td 4216 ft. J. T. Parks et al's Dean 1, sw se 24-15-26 (1800 ft. s of Lenz test) cored 5½ ft. saturated sand 4234-39 ft. test dry sd wo.

POPE COUNTY—Ark-La Gas Co.'s L. C. Smith 1, se se 10-8-21, sd repr rig 3790 ft.

PULASKI COUNTY—A. L. Kitselman's Fee 1, 2-1s-13w, sd 792 ft.

MILLER COUNTY—Phillips Pet. Co.'s Morgan 1, c s½ 18-18-17, owdd td 4270 ft.

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Western Gulf's S. P. Land Co. 3, 3-17-15, td 8331 ft, redr at 7900 ft.

KERN COUNTY

LERDO—Arkelo Pet. Co.'s Arkelo 1, 23-28-26, dr hard shale 7253 ft.

RIO BRAVO—Associated's K.C.L. 1, 30-29-25, td 7683 ft, co at 7358 ft.

SO. MARICOPA—E. A. Bender's Robinson 1, 14-10-23, sd 1235 ft, plug 750 ft. Trans-Line Pet. Corp. No. 1 3-10-23, dr hard shale 610 ft.

GREENFIELD — British American's Smith 1-A, 21-31-27, sd 1128 ft.

GRAPEVINE—Buffalo Oil Co.'s Tejon 1, 5-10-19, dr sandy shale 1115 ft. Ohio Oil Co.'s Title Ins. D-11, 21-11-19, dr gray sand 6224 ft. Reserve Oil & Gas Co.'s Ritchie 33-1, 33-11-19, td 6030 ft, plug 4990 ft, sd; Tejon 33-2, 33-11-19, td 4505 ft, plug 4414 ft, sd; Tejon 33-3, dr shale 4047 ft.

SAN EMIDIO—I. L. Burch's No. 1, 31-10-23, sd 2460 ft. Union Oil Co.'s No. C-1, 34-11-22, grade.

MOUNT POSO—Calcoast Oil Co.'s No. 1, 36-26-27, td 2655 ft, co.

WASCO—Continental Oil Co.'s K.C.L. A-1, 8-27-24, td 7116 ft, in hard sand, tried to blow out while coming out, gas and spray of oil, pumped in heavy mud.

DEVIL'S DEN—Den Pet. Co.'s Bates 1, 20-25-19, sd 2215 ft. H. C. & E. A. Long's No. 1, 20-25-19, dr silty shale 935 ft. Lube Oil Co.'s No. 1, 2-25-18, dr hard shale 1574 ft.

JASMINE—Doyle Pet. Corp.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, sd.

EAST EDISON — East Edison Oil Co.'s Tejon 1, 21-30-30, td 1044 ft, to deepen; No. 2, 22-30-30, lcn.

ARVIN—General Pet. Corp.'s No. 1, 26-31-29, td 7462 ft, co to 6606 ft, to test by stages. Superior Oil Co.'s No. 1, 26-31-29, foundation.

MOUNTAIN VIEW — Mohawk Pet. Co.'s Earl Fruit 2, 10-31-29, td 6164 ft, bailing; Earl Fruit 3, 4-31-29, sd. Shell's Greer 1, 15-31-29, td 6171 ft, plug 6148 ft, sd.

KERN FRONT—Seskayden Oil Co.'s No. 3-A, 17-28-27, rig.

STOCKDALE—Signal Oil & Gas Co.'s No. 1, 6-30-27, lcn.

MISCELLANEOUS

HUMBOLDT—Texas Co.'s Eureka 2, 22-3-1, td 7125 ft, fsh.

KINGS COUNTY—Associated's Avernal 2, 35-23-17, td 1029 ft, dr in shale and oil sand. A. S. Clare's Laymance 1, 20-20-22, rig. Milheim Oil Corp.'s Resources 1, 20-22-22, td 5810 ft, fsh.

SAN BENITO COUNTY — Associated's Murphy Ranch 1, 5-12-4, td 4784 ft, redr at 4671 ft.

SAN JOAQUIN COUNTY—Standard's Tilden Com. 1, 31-2-5, foundation.

SOLANO COUNTY—Amerada Pet. Corp.'s Hamilton 1, 26-4-2, td 6792 ft, plug 4304 ft, to run liner for test; Hoppe 1, 22-4-2, sd 7029 ft; Serpa 1, 23-4-2, td 4476 ft, wocs 7-in at 4300 ft.

SUTTER COUNTY—Buttes Oil Fields' No. 4, 2-15-1, dr sandy shale 4836 ft.

TULARE COUNTY—J. W. Alford's Williams 1, 28-16-23, sd 1023 ft. R. R. Ellis' Ellis 1, 20-24-23, rig. E. P. Jennings' No. 1, 4-24-23, sd 2820 ft. Seaboard Oil Corp.'s Security 1, 16-23-26, spud Dec. 29, dr.

MONTEREY COUNTY—Amil A. Anderson's No. 1, 15-24-14, dr hard shale 674 ft. Shell's Branch 2, 34-24-10, td 5115 ft, fsh. Texas Co.'s Dunphy 1, 30-19-7, td 750 ft, lost circulation, pumping in weight material.

SAN LUIS OBISPO COUNTY

OCEANO—Aviation Oil Co.'s Brintnall 1, 10-11-35, dr shale 1056 ft.

CORRIZO PLAINS — Barnsdall Oil Co.'s K.C.L. A-1, 1-32-20, lcn.

CHOLAME—Cholame Synd.'s Jack 2, 10-25-15, td 3648 ft, co.

ARROYO GRANDE—A. T. Jergins' Trust Indian Knob 1, 26-31-12, td 1438 ft, to run casing.

HUASNA VALLEY—Union's Porter 1, 22-32-15, dr 4000 ft.

PANORAMA HILLS—United Foreign Oil Co.'s Panorama 2, 2-32-21, dr hard sand 2434 ft.

SANTA BARBARA COUNTY

EL CAPITAN—Associated's Edwards Est. 1, 2-4-30, td 2450 ft, plug 2150 ft, perforated 2070 to 2125 ft, bailing water, trace of oil.

GATO RIDGE—Barnsdall Oil Co.'s Tognazzini 3, 9-8-32, lcn. O. C. Fields Gaso. Corp.'s Continental 1, 4-8-32, rur. Ben Moyle's Arrata 1, 9-8-32, foundation. Petrol Corp.'s Tognazzini 1-A, 9-8-32, dr hard shale 1693 ft. Todos Santos McLoney 1, 4-8-32, sd 50 ft.

SUMMERLAND—Julia Dietman's Fithian 1, 8-4-25, sd 1025 ft.

LOMPOC—O. C. Field's Santa Rita 1, 11-7-33, td 2064 ft, to resume operations. Top Row Oil Co.'s Spanne 1, 6-35, sd 1310 ft.

CUYAMA—Daniel Fisher's No. 1, 28-11-28, dr shale 630 ft.

CASMALIA—Golden Bear Oil Co.'s No. 1, 20-9-34, rig. Valley Oil Co.'s Chief 1, 20-9-34, rur. Todos Santos Oil Co.'s No. 1, 29-9-34, td 2365 ft, plug 1705 ft, sd.

BETTERAVIA—E. H. Moore's Union Sugar A-1, 25-10-35, td 8020 ft, redr at 4100 ft.

POINT CONCEPTION—101 Oil Co.'s Hollister 1, 35-5-33, sd.

SANTA MARIA—W. D. Shaffer's Houk 1, 9-9-33, td 1705 ft, 11¾ in set at 1702 ft, testing.

VENTURA COUNTY

OJAI AREA—Echo Falls Oil Co.'s Scott 1, 5-4-21, material on lcn.

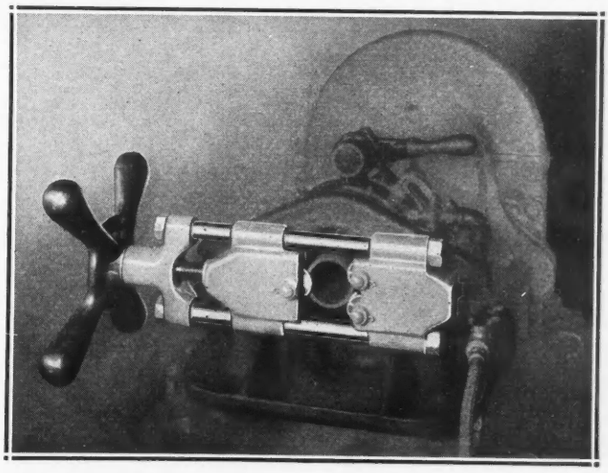
OXNARD—Vaca Oil Explor. Co.'s Calif. Lands 1, 6-1-21, td 2830 ft, plug 2150 ft, bailing.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, sd 9525 ft.

SOUTHERN CALIFORNIA

NEWHALL — Barnsdall Oil Co.'s Rancho S. F. 1, 26-4-17, td 6215 ft, to set 8⅝ in at

Ten Advantages of Wheel Cut-off



The Model-A Beaver Special Pipe Machine, with wheel and roller cutoff, offers you these ten advantages:

1. **Cuts all sizes from ⅛ to 2-inch—not merely ½ to 2-inch.**
2. **Cuts solid rounds up to 1-inch. Knife cut off does not do this.**
3. **It's faster—cuts 2-inch in ten seconds.**
4. **No "chatter" therefore no knife points to break.**
5. **No DULL knives. Wheels are inclined to be self-sharpening.**
6. **Simple—nothing to get out of order.**
7. **New wheels—cost only 24c. Any "make" will fit.**
8. **No "fin" as is left in cut made by knife cutoff.**
9. **Easier cutting. Cutting power applied directly back of cutting wheel.**
10. **Cuts shorter lengths—and cuts all kinds of pipe—steel, wrought-iron, brass, copper, etc.**

Complete detailed information may be had by writing to BEAVER PIPE TOOLS, INC., 137 Week Ave., Warren, Ohio

6160 ft. Holbrook Pet. Co.'s Newhall L. & Eng. Co. 1, 28-4-16, sd 4025 ft.

LYNWOOD—Calizoo Oil Co.'s Sawlque 1, 9-3-13, td 3995 ft, dr pipe stuck, circulating oil.

LOS ALAMITOS—Calmont Oil Co.'s Montana 1, 14-4-12, lcn.

NO. LONG BEACH — Geo. L. Clayton's Clayton 1, 32-3-12, td 2130 ft, sd due to rains.

FOX HILLS AREA — Country Club Oil Co.'s Country Club 1, bldg rig.

CLEARWATER—H. Heides Rogers 1, 20-3-12, rur.

MONTEBELLO—Honolulu Oil Corp.'s Core Hole 1, 14-2-12, dr shale 3420 ft.

PUENTE—Honolulu Oil Corp.'s Butler 1, 15-2-10, rur.

WALNUT—Julian Criswell's Langstaff 1, 5-2-9, dr shale 970 ft.

PALOS VERDES—McClaren Bros.' No. 1, 27-4-16, td 3992 ft, to redr and deepen. So Calif. Dr. Co.'s Burhard 1, rur.

ROSECRANS—Shell's McKinley 4-1, 20-3-13, dr sand and shale 5017 ft.

HAWTHORNE — Signal Finance Corp.'s Woods 1, 10-3-14, td 9395 ft, wocs 6 in at 7128 ft.

GARDENA—Standard's Bodger 1, 22-3-14, td 8044 ft, ran formation tester, abn. Universal Cons. Oil Co.'s Carrell 1, 36-3-14, dr sand and shale 7268 ft.

FOX HILLS—Superior Oil Co.'s Englewood Ext., 25-2-15, td 9486 ft, abn.

DAVIDSON CITY — C. G. Willis' Flood Control 1, 11-4-13, dr shale streaks sand 4660 ft.

ORANGE COUNTY — Calif. Eastern Oil Co.'s Verde 1, 31-31-9, td 4750 ft, abn. Mesa Oil Co.'s Mesa 1, 29-6-10, dr hard shale streaks sand 434 ft. West Coast Refining Co.'s Yorba 1, 25-3-9, td 2725 ft, plug 2600 ft to redr.

SAN BERNARDINO COUNTY—Equitable Pet. Explor. Co.'s No. 1 (Barstow), 11-10-5, td 3032 ft, plug 2300 ft, sd. Tehama Pet. Co.'s Kraemer Backs 2, 33-2-8, sd 1275 ft. Tehama Pet. Co.'s Pellisier 1, 4-3-8, sd 1312 ft.

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ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so&g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

COLORADO

KIOWA COUNTY—Gulf Oil Corporation's Risser-Union Pacific 1, csw ne 1-17s-50w, dr plug after cementing 10¾ in csg at 3925 ft.

LAS ANIMAS COUNTY—Garcia Corporation's McClung 1, ne nw se 19-33-61w, sd 1000 ft.

MOFFAT COUNTY — Anderson Kerr and Phillips Petroleum Co.'s Government 1, cse se 19-9n-99w, mit.

PARK COUNTY — South Park Oil Co.'s State 1, se se sw 16-11s-75w, dr 5680 ft in sandy shale. Company's Lemarr 1, ne ne se 34-11s-75w, dr 3400 ft in grey shale.

KANSAS

BARBER COUNTY—Pure Oil Co.'s Palmer 1, se ne sw 10-33s-10w, cor 4878 ft.

BARTON COUNTY—Minnehoma O & G Co.'s Smith 1, nw nw ne 20-18s-13w, rust. Duee & Brouk's Baker 1, ne se sw 16-17s-13w, dr 2390 ft. Freeborn et al's Sooy 1, nw nw ne 27-18s-12w, sd 200 ft. John Burton's Wendel 1, ne ne ne 13-19s-11w, sd 2856 ft. I.T.I.O. Co.'s Schrepel 1, se se ne 26-20s-11w, dr 1250 ft. D. R. Buchanan et al's J. Schartz Jr. 1, nw nw ne 20-19s-11w, woc. Herndon Drlg Co. & Morgan & Flynn's Robenseifer 1, cnw 7-18s-15w, mim. Stanolind O & G Co.'s Riemann 1, sw sw nw 34-16s-13w, lcn.

BUTLER COUNTY—Wixon et al's Coulter 1, nw sw ne 3-27s-7e, dr 2225 ft. Cox & McGinnis' Faulders 1, sw sw ne 27-25s-3e, mi mach.

CHAUTAUQUA COUNTY—Sagamore Oil Co.'s Kingston 1, ne ne nw 17-32s-10e, ru mach. Brosius et al's Morris 1, sw nw sw 6-32s-12e, dr 650 ft.

COWLEY COUNTY—Tom Palmer's Pierce 1, se se sw 14-31s-3e, td 3391 ft, D & A. Austin & McKnabb's Wilson 1, ne ne se 20-32s-6e, dr 2400 ft. C. H. Cross' Cook 1, sw sw sw 6-32s-6e, ur 8-in csg. Simpson Oil Co. & Stanolind's Weigle 1, sw sw ne 18-31s-6e, dr 1470 ft. W. M. McKnabb's Weldschmidt 1, sw sw nw 18-34s-6e, ru.

DECATUR COUNTY—Winkler & Koch's Vessey 1, cnw se 26-3s-26w, dr 1750 ft.

EDWARDS COUNTY — Stanolind & Elwell's Donovan 1, cse se 14-25s-18w, dr 4900 ft.

ELLIS COUNTY—Empire's Samuelson 1, ne ne se 31-11s-16w, woc. Ted Kerr et al's Koblitz 1, se sw nw 23-12s-18w, 1600 ft oih, 12 hrs, swb 48 bbls oil & sd. Taylor et al's Emery 1, ne ne ne 23-14s-18w, sdo. Murphy Oil Co.'s Wiesner 1, se se sw 12-14s-19w, fsg 1275 ft. Jones Bros et al's Phillips 1, se se nw 9-15s-17w, dr 3000 ft. Lario O & G Co.'s Cress 1, ne ne ne 13-11s-17w, fsg 2945 ft. Empire O & G Co.'s Hall 1, se se se 2-12s-17w, cel. Winkler & Koch's Jensen 1, sw sw ne 3-13s-18w, ru. Sunray Oil Co.'s Befort 1, ne ne ne 11-14s-20w, cel.

ELLSWORTH COUNTY—Empire's Brown 1, se se nw 1-17s-9w, dr 2991 ft.

GREENWOOD COUNTY—Scott et al's Pedroja 1, se ne se 6-26s-10e, testing. Holis et al's Boone 1, ne ne nw 21-26s-12e, woc. Ohio's Schwab 1, se sw se 9-24s-10e, ru mach.

HARVEY COUNTY—Saco et al's Guthrie 1, ne ne nw 8-22s-2e, ur 8-in csg. Harburney Oil Co.'s Schrag 1, nw nw se 24-22s-3w, co 3350 ft.

KEARNEY COUNTY—J. L. Murphy et al's Campbell 1, nw nw sw 32-25s-35w, testing.

KINGMAN COUNTY—Shell Pet Corp.'s McMichael 1, CW½ w½ sw 12-27s-10w, br.

LANE COUNTY—K. C. Bates' Bates-Nimocks 1, cnw ne 16-16s-28w, lcn.

LOGAN COUNTY—Rosespring Drlg. Co.'s Wright 1, cse se 12-15s-35w, fsg 3909 ft.

LYON COUNTY—Clyde Fred et al's Bruce 1, nw nw nw 13-18s-10e, dr 1575 ft.

MITCHELL COUNTY—Geo. Siedhoff et al's Greiss 1, sw sw se 16-8s-10w, dr 2002 ft.

OSBORNE COUNTY—Helmerich & Payne's Hittinger 1, cse se 2-7s-11w, dr 2450 ft.

PAWNEE COUNTY — Kessler & Their's Wallace 1, se se nw 16-23s-15w, dr 590 ft.

PRATT COUNTY—H. V. Elwell et al's Fay 1, nw nw se 15-27s-14w, fsg 3500 ft.

RENO COUNTY—Foraker et al's Hiett 1, se sw ne 34-24s-4w, sd 3875 ft. Empire's Schrock 1, nw nw ne 22-24s-5w, set 7-in csg 3397 ft, rust. Westgate-Greenland Oil Co.'s Fossey 1, sw sw se 12-22s-8w, dr 3916 ft. W. E. Witt et al's Wright 1, se ne ne 9-23s-8w, rur. Helmerich & Payne et al's Stewart 1, se se ne 16-24s-6w, rur.

RICE COUNTY—Carlock et al's Deweese 1, sw nw nw 32-20s-7w, dr 3377 ft. Shell Pet. Corp. et al's Soeken 1-A, cnw 10-19s-9w, sd. I.T.I.O. Co.'s Fossey 1, sw sw ne 31-20s-10w, dr 2045 ft. Dickey Oil Co.'s Brothers 1, se se se 1-21s-7w, dr 1465 ft. Sage et al's Patton 1, sw sw sw 5-21s-7w, testing. Buckley's Bailey 1, sw sw nw 19-20s-6w, rur.

ROOKS COUNTY—Buckner & Schoff's McConnell 1, ne ne ne 34-6s-18w, co 1765 ft. Empire's Ham 1, sw nw nw 24-18s-19w, td 3598 ft, D & A. Snowden & McSweeney's Hindman 1, ce½ nw 35-7s-17w, dr 3018 ft. Graham et al's Fike 1, sw sw sw 9-9s-17w, rust 3220 ft. Basin Oil Co.'s Baxa 1, ne ne ne 23-9s-17w, mim. Jones Bros. Drlg. Co.'s Wiss 1, nw nw nw 8-10s-18w, lcn.

RUSH COUNTY—Schoenfeld & Kitch' Winget 1, se se se 15-16s-16w, 1800 ft oih 10 hours and 50 min. H. M. Pigott et al's Maresch 1, cnw nw 28-19s-19w, dr 2310 ft. S. A. Murphy et al's Roth 1, nw nw sw 21-16s-18w, rig.

RUSSELL COUNTY—Empire's Frederick 1, se se se 18-15s-11w, ur 7-in csg 3035 ft. Equity Gas Co.'s Harbauk 1, nw ne sw 19-13s-12w, woc. El Dorado Ref Co.'s Scott 1, nw nw ne 17-13s-13w, rust 3278 ft. Thayer Drlg Co. & Dee Miller's Cook 1, sw sw sw 10-13s-15w, dr 860 ft.

SALINE COUNTY—James Brouk et al's Tehlander 1, ne nw se 10-16s-3w, 1700 ft oih, 4 days. Ryan Consolidated's Wuerth 1, sw sw nw 28-14s-2w, ru.

SHERIDAN COUNTY—O. A. Roberts et al's Corrick 1, cnw 34-9s-26w, dr 3670 ft.

STAFFORD COUNTY—Skelly's Kipp 1, se se ne 27-25s-14w, woc. Empire's Jordan 1, sw sw nw 15-25s-14w, co 3914 ft. Skiles et al's Hughes 1, sw sw sw 12-23s-12w, dr 3480 ft. Lebow et al's Wolf 1, se sw nw 3-21s-12w, dr 2563 ft. Stanolind O. & G. Co.'s Rosacker 1, sw sw ne 5-25s-11w, dr 2340 ft.

SUMNER COUNTY—Rosespring Drlg Co.'s Rutter 1-A, cnw nw 21-33s-2e, pb 3235 ft, woc. Empire's Hoffman 1, nw nw sw 27-34s-1e, sd 3728 ft. Graham et al's Dawson 1, nw nw nw 4-33s-2w, dr by 2750 ft. Lario et al's Hall 1, nw sw nw 11-35s-1e, set 8-in csg 2565 ft. Lloyd, Frost, Study et al's Fee 1, se se se 31-34s-1e, sd 3315 ft. Orcott & Stewart's Newton 1, se se se 21-30s-2e, dr 930 ft. Wakefield & Mead Oil Co.'s Napp 1, sw sw nw 2-34s-5e, ru. E. B. Shawver et al's Bryan 1, cw½ w½ sw 36-30s-2e, mim.

TREGO COUNTY—York State Oil Co.'s Gugler 1, sw sw sw 36-12s-21w, P 125 bbls oil & 104 bbls water, 24 hrs. Black Gold Oil Co.'s Allman 1, csw sw 34-14s-21w, rot rig. Central Commercial's Burkett 1, csw 15-11s-22w, OTD 3889 ft, dry hole, co to dd.

WOODSON COUNTY—Ross & Marshall's Bresner 1, sw sw se 6-26s-16e, ru. Reamer's Corn 1, ne ne ne 31-26s-15e, sd 1680 ft.

NORTH LOUISIANA

BIENVILLE PARISH—Lide, Greer et al's J. D. Smelley 1, sw ne 13-16-5, dr 5675 ft. base massive anhydrite 5640 ft. Texas Seaboard Oil Co.'s McGee 1, section 3-16n-6w, dr 7235 ft.

BOSSIER PARISH—Ark-La-Gas Co.'s Davis 1, 8-17n-11w, dr 4289 ft. Potter 1, 8-17n-11w, dr 3703 ft. La. Pet. Corp.'s Edwards Est. 1, 5-17n-11w, spudded. Triangle Drlg Co.'s Bolinger 1, 36-23n-12w rur. Shannal I-1, 22-17n-12w, set 9⅝-in. about 2615 ft. United Gas' Freedman 1, 15-17n-12w, dr 2655 ft. Skannal H-1, 26-17n-12w, rur.

CADDO PARISH—Ferguson et al's Huckabay 1, 22-22n-16w, rur. Gulf's E. P. Hatcher 1, dr 8035 ft. R. W. Norton's Payne 1, se se 27-23-16, 9⅝-in. csg 6200 ft. dr 6985 ft. (10,000 foot test.)

CLAIBORNE PARISH — United Gas' Rufus Sims 1, sw nw 32-20-5, dr 2693 ft. Max Hirsch et al's Ferguson 1, nw sw 29-22n-6w, dr 3912 ft.

CATAHOULA PARISH—Balconies Oil Co.'s T. J. Chisum 1, 19-10n-8e, rur. Matheny & Schumacher's W. S. Peck 1, 40-10n-8e, mim.

DESOTO PARISH—Sundby et al's Garland 1, se nw 7-14n-14w, base annona chalk 2095 ft. top Tokio 2592 ft. top washita 2690 ft. cor 2998 ft. Julian-Igoe Synd's Hallie Smith 1, se se 31-14n-14w, lcn. Grogan Oil Co.'s Ramsey 1, 36-11n-11w, arr deepen td 1780 ft. Sanders et al's L. N. Allison 1, 17-14n-13w. mir. Chamberlin et al's Lanier 1, 29-11n-11w dk. Grady Vaughn et al's Sample 1, 24-11n-14w, td 4480 ft., increasing weight of mud after tried to blow out.

NATCHITOCHES PARISH—Natchitoches Oil Co.'s J. S. Simpson 1, 12-7n-7w, sd 1350 ft. Jack Lent et al's Lock 1, se sw sd 50 ft. Robert Keen's Moffitt 1, ne sw 19-10n-10w, rur.

RED RIVER PARISH—W. J. Hunter et al's Long Bell 1, ne ne 19-13n-9w, sdtr tested sw so mud 3720-23 ft. set 5-3/16 in. csg at 3720 ft. arr test again.

RICHLAND PARISH—Gulf's R. R. Rhymes 15, se ne 32-17n-6e, elv 87 ft. top anhydrite 2936 ft. base red beds 6380 ft. 7-in. csg. 8040 ft., dr 8795 ft.

SABINE PARISH—Earl F. Fox's L. B. Blankenship 1, 13-9n-12w. Whitehurst et al's Whitney 2, 8-9-13, lcn. A. C. Scott's Bowman Hicks 1, 23-9-13, owdd td 2020 ft.

WEBSTER PARISH—Ohio Oil Co.'s Bodcaw Lbr. Co. 1, ne sw 28-21n-10w, elv. 234.8 ft. top anhydrite 4225 ft. base stringer 4546 ft. cored saturated oil sand 8159-86 ft. td, set 7-in. csg 8170 ft., completed making est 75 to 100 MCF gas, open flow potential, 250 to 300 bbls distillate daily. R. M. Coyle 1, ne se 22-21-10, elv. 216 ft. massive anhydrite 4119-4359 ft. cored oil-gas sand 8140-77 ft. td. prep to set csg. S. T. D. Coyle 1, se sw 23-21n-10w. mir; A. J. Hodges 2, nw sw 23-21n-10w, lcn. United Gas' Mixon 1, 22-21-10, dr 7568 ft. C. V. Davis 2, nw nw 23-21-10, dr 7645 ft. Woodley Pet Co.'s Gray B-4, ne ne 27-21n-10, dk. Magnolia's Cox 1, 23-21n-10w, dr 7968 ft. Tidewater Oil Co.'s L. Pipes 1, 10-18n-10w, elv 187 ft., top first anhydrite 4366 ft. dr 4862 ft. Standard of La's Fuckicker 1, se nw nw 2-17n-9w, top first anhydrite 4707 ft. dr 5697 ft. Red Hawk Oil Co.'s Baker 2, 9-22-9, dr 2057 ft. last report.

WINN PARISH—C. W. Cline's Collingsworth Hrs 1, se se 14-10n-6w, dk & mir.

SOUTH LOUISIANA

ACADIA PARISH—Humble's Nordyke 1, Ebenezer prospect, 23-10s-1e, dr shale 6693 ft. Superior's C. Savoy 1, Bayou Mallett, 47-7s-1e, running 7-in csg to 6985 ft.

CALCASIEU PARISH—Union Sulphur's Irwin 1, se of Lake Charles, 10-10s-8w, sd 8472 ft.

CAMERON PARISH—Pure's State Mallard Bay 1, Mallard Bay prospect, 22-13s-3w, dr soft sand 8106 ft.

EAST BATON ROUGE PARISH—Louisiana Crusaders Oil Co.'s L. S. U. 1, University block, 67-7s-1w, abn 7260 ft.

IBERIA PARISH—Texas Co.'s State Fausse Point 2, Fausse Point prospect, 35-11s-8e, dr shale 6898 ft; same operator's State Vermilion Bay 1-B, in Vermilion Bay, 20-15s-6e, dr shale 10,109 ft. Jefferson Lake Oil Co.'s Lake Peigneur 414, Lake Peigneur 12s-5e, dr salt 3950 ft.

JEFFERSON PARISH—Triangle Oil Co.'s Carroll 1, 125-12s-11e, sd 1903 ft.

JEFFERSON DAVIS PARISH—Amerada-Stanolind's Calcasieu National Bank 1, China prospect, 28-7s-3w, dr shale 2057 ft. H. M. Naylor's Johnson-Boudreaux 1, South Jennings area, 3-10s-3w, dk. Stanolind's United Life Insurance Co. 1, Hayes prospect, 16-11s-5w, mim.

LAFOURCHE PARISH—Foh's State Long Lake 1, in Long Lake, 65-17s-19e, dredge canal. Wm. Helis's City of New Orleans 1, Marchland prospect, 19-23s-23e, dr shale 6245 ft.

PLAQUEMINES PARISH — Tide Water's Manhatten Fruit Co. 1, Venice dome, 26-21s-30e, no report.

ST. BERNARD PARISH—Gulf's Lake Lery 1, Lake Lery prospect, 28-14s-14e, dr shale 3493 ft.

ST. LANDRY PARISH—Superior's A. Savoie 2, Cankton field, 26-8s-3e, lcn.

ST. MARTIN PARISH—Shell's Hefea Land Co. 1, Gecho-Arnaudville prospect, 38-8s-5e, dr shale 8398 ft. Stanolind's Numa Patin 1, Anse La Butte, 46-9s-5e, dr sandy shale 3374 ft. Texas Co.'s State Mongouloi 3, Lake Mongouloi prospect, 14-10s-9e, lcn; same operator's St. Martin Land Co. 9, Henderson prospect, 21-8s-7e, running csg 1269 ft.

ST. MARY PARISH — Texas Co.'s State Bateman Bay 1, Morgan City prospect, 21-16s-12e, lcn; same operator's State Bayou Sale 1, Wax Lake prospect, 40-17s-9e, dr shale 9603 ft.

TERREBONNE PARISH—Humble's Ellender 1, Houma Gas field, 23-19s-19e, woc 8381 ft. Shell's Realty Operators 1-B, w of Houma, 18-17s-15e, dr shale 6845 ft.

VERMILION PARISH—Continental's Hebert 1, Abbeville prospect, 20-12s-3e, woc 11,795 ft. Stanolind's Fred Stovall 1, South Abbeville prospect, 89-14s-3e, td 10,840 ft, ran electrical logging device to 10,575 ft.

MICHIGAN

ALLEGAN COUNTY—Russel Sapp's Hudson 1, sec 2n-13w, sd 1670 ft. Lentz Trustee's Raab 1, sec 16-4n-13w, lcn.

ARENAC COUNTY—L. E. Doyle's Shimmons 1, sec 24-20n-4e, lcn. J. E. Flannigan's Whipple 1, sec 18-20n-5e, lcn.

CLARE COUNTY—Sun Oil Co.'s Campbell 1, sec 12-19n-3w, Dundee 3875 ft, dr 3908 ft. Wittmer Oil Co.'s Musgrave 1, sec 3-18n-5w, ur 1498 ft.

CLINTON COUNTY—Petroleum Exploration Co.'s Schneeberger 1, sec 11-5n-2w, dr 2830 ft. Prima Oil Corp.'s Fitzpatrick 1, sec 10-8n-4w, dr 2230 ft.

GLADWIN COUNTY — McClanahan Oil Co.'s Avery 1, sec 10-17n-1e, mim. J. V. Wicklund Development Co.'s State A1, sec 11-18n-1w, Dundee 3534 ft, oil 3598 ft, td 3610 ft, moving in additional storage and will deepen.

GRATIOT COUNTY — Charles Anderson's Askergrad 1, sec 9-9n-1w, sd 520 ft. Gulf Refining Co.'s Moorman 1, sec 7-11n-2w, Dundee 3241, dr 3250 ft. Charles Weller's Bolyard 1, sec 27-9n-3w, dr 690 ft. Harry B. Cowdrey's De Vuyst 1, se se sw, sec 11-10n-2w, rig. Herbert Snell's Smead 1, sec 20-11n-4w, sd 3178 ft.

HURON COUNTY—C. W. Teater's Inda 1, sec 32-18n-13e, dr 1840 ft. Keller 1, sec 27-16n-11e, dr 1610 ft.

ISABELLA COUNTY—Smith an McClanahan's Simons 1, ne ne se, 3-13n-5w, rig. H. E. Bell's Delo 1, sec 17-13n-5w, dr 430 ft. Burnstein Oil & Gas Co.'s Sherman 1, sec 1-16n-5w, dr 500 ft.

MISSAUKEE COUNTY — M. J. Ingold's Donley 1, sec 31-22n-8w, sd 3460 ft. Rex Oil Co.'s Meekoff 1, sec 30-21n-6w, dr 645 ft.

OSCEOLA COUNTY—M. B. Keeler's Beall 1, sec 24-18n-9w, so 3380 ft, dr 3490 ft. Dibble Brothers' Townsend 1, sec 4-20n-7w, sd 2740 ft. Osceola Oil Co.'s Gregg 1, sec 22-18n-7w, mim.

MONTCALM COUNTY — L. T. Barber's Rice 1, sec 20-12n-7w, dr 3477 ft. Charles Weller's Herzog 1, sw sw sw, sec 14-9n-6w, rig. R. F. Ide's Mortonsen 1, sec 11-11n-6w, dr 1550 ft. R. E. Gallagher's Hayden 1, sec 25-11n-7w, sd 1420 ft.

MISCELLANEOUS COUNTIES: Bay—Hogan and Wright's Sobuary 1, sec 12-17n-4e, sd 1650 ft. Hillsdale—Hughes Heinig's Daley 1, sec 10-7s-4w, dr 700 ft. Jackson—Morris Oil Corp.'s Peters 1, sec 23-2s-2e, mim. Lake—R. B. Tamblyn's Cashion 1, sec 25-18n-13w, rig. Ogemaw—Gordon Oil Co.'s Everitt 1, sec 13-23n-2e, dr 2510 ft.

MONTANA

CARBON COUNTY — Bailey-Round Butte Oil Co.'s 2, sw ne se 3-6s-23e, reaming at 1235 ft to lower 8¼ in csg for water shut off. George Muth & Fort Peck Association's 1, csl se se 23-6s-23e, sd 1477 ft, preparing to run 8¼ in csg.

FERGUS COUNTY—Emmons et al's Government 3, se ne ne 6-21n-18e, dr 1100 ft. Emmons et al's Government 4, sw sw sw 3-21n-18e, dr 460 ft. Judith Operating Co.'s Government 2, cwl nw ne 35-22n-17e, dr 3212 ft.

PARK COUNTY—Ben Ryan's Burgess 1, se sw nw 28-28n-11e, dr 545 ft.

PETROLEUM COUNTY—H. Clark Rowland et al's Kalispell 1, ne ne se 31-14n-25e, dr 651 ft.

PHILLIPS COUNTY — R. G. Parrent's Hartman 1, cnw se 12-24n-25e, dr 678 ft.

PONDERA COUNTY—Gordon Campbell's Hughes 1, ne ne nw 12-30n-4w, fsg for tools and socket at 2497 ft. Klinch Petroleum Co.'s Hollam 1, nw nw nw 21-28n-6w, dr by bailer at 2250 ft.

NEBRASKA

FRANKLIN COUNTY—William Stienle's 1, se ne se 23-1n-15w, dr 437 ft.

LINCOLN COUNTY — Smith & Wright's Hansen 1, 24-15n-30w, dr 210 ft.

SIOUX COUNTY—J. M. Huber Corporation's Morgan 1, cnw sw 32-35n-56w, dr 2515 ft.

NEW MEXICO

LEA COUNTY — Anderson-Prichard Prod. Corp.'s C. M. Carlson 2, c sw nw 21-25s-37e, elev 3072 ft, sd 2840 ft. Baldridge et al's Blakey 1, c nw ne 5-20s-38e, elev 3586 ft, base salt 2660 ft, co 3040 ft. Brown & Reynolds' Parcell 1, c nw se 8-21s-38e, elev 3573 ft, base salt 2820 ft, making gas, dr by tools, td 3160 ft. Carlock et al's Quincy-Ricker 1, c se se 7-16s-36e, elev 3945 ft, top anhydrite 1975 ft, dr 4510 ft. Amon G. Carter et al's E. M. Elliott 1, c nw nw 22-22s-37e, elev 3374 ft, dr 3525 ft; Elliott 2, c ne nw 22-22s-37e, elev 3375 ft, dr 2800 ft. C. & G. Oil Co.-The Texas Co.'s Ellen Weir 1, c ne ne 14-20s-37e, elev 3564 ft, td 4074 ft, sdo. J. C. Clower et al's W. H. Turner 1, c se se 29-21s-37e, elev 3469 ft, dr 3510 ft. Barney Cockburn & Rowan-Nichols Oil Co.'s H. G. Mattern 1, c sw se 7-22s-37e, elev 3426 ft, td 3789 ft, tested mostly water, sdo. Continental Oil Co.'s M. E. Wantz 1, c sw sw 21-21s-37e, elev 3499 ft, dr 2450 ft. Culbertson, Erwin & Stovall's J. R. Stuart-Repollo 2, nw se se 10-25s-37e, elev 3108 ft, fsh 3277 ft; Stuart-Repollo 3, ne se sw 10-25s-37e, elev 3111 ft, sp and sd. Devonian Oil Co.'s A. L. Christmas 1, ne ne se 28-22s-37e, elev 3339 ft, dr 3530 ft. El Paso Nat'l Gas Co.'s W. H. Harrison 1, c nw nw 7-25s-37e, dk; Harrison 2, c nw nw 29-24s-37e, dk; Geo. W. Toby 1, c se se 12-24s-37e, rur. Empire O&R Co.'s R. L. Brunson 1, nw nw se 4-22s-37e, elev 3446 ft, top anhydrite 1140 ft, show oil 3085-90 ft, dr 3300 ft; Anna Walden 1, c se nw 21-22s-37e, elev 3352 ft, shot 300 qts nitro 3475-3600 ft, pay 3515-3600 ft, flowed 133 bbls oil 12 hrs initial. A. R. Eppenauer et al's F. B. Stuart-Amerada 1, ne ne ne 22-25s-37e, elev 3082 ft, top anhydrite 1000 ft, top salt 1200 ft, fsh 2740 ft. J. E. Farrell & Co.'s E. W. Walden-Amerada 1-A, c sw nw 15-22s-37e, elev 3407 ft, dr 3410 ft; Walden-Amerada 1-C, c sw sw 15-22s-37e, elev 3385 ft, making gas, fsh 3502 ft. Geo. F. Getty Oil Co.'s D. C. Hardy 2, c sw se 20-21s-37e, elev 3497 ft, shot 240 qts nitro, td 3800 ft, co cavings 3620 ft, est 2,000,000 ft gas; Etz-Conoco 1, c ne ne 12-21s-32e, elev 3822 ft, fsh 1015 ft. Harry W. Leonard et al's B. T. Lanehart 3, c ne nw 21-25s-37e, elev 3081 ft, lcn. Magnolia's E. O. Carson 3, c sw sw 28-21s-37e, elev 3467 ft, td 3775 ft, flows small heads, co after shot; State 1-G, nw nw ne 24-17s-34e, elev 4019 ft, top anhydrite 1700 ft, fsh bit 4050 ft. Maljamar O&G Corp.'s Baish 8, c sw ne 21-17s-32e, rig. Joe C. Maxwell, R. Crandall & C. H. Osmond's State-Lane 1, c sw nw 32-10s-34e, elev 4205 ft, top anhydrite 2060 ft, base salt 2750 ft, dr lime 4480 ft. Plains Prod. Co. et al's Knight-Humble 3, c se se 21-24s-37e, elev 3218 ft, spraying oil, fsh 3430 ft; Knight-Humble 4, c sw sw 22-24s-37e, elev 3225 ft, lcn. Repollo Oil Co.'s O. J. Boyd 2, nw nw nw 23-22s-37e, elev 3338 ft, td 3700 ft, co bridge at 2900 ft after nitro shot; Robt. Jamison 2, sw sw nw 22-24s-37e, elev 3236 ft, dr 3150 ft; A. M. York 1, se se ne 20-21s-37e, elev 3495 ft, td 3850 ft, co cavings at 3845 ft after nitro shot. Rushwold Oil Co.-Conoco & California Co.'s E. E. Carter 1, c nw ne 30-20s-39e, elev 3559 ft, top anhydrite 1616 ft, base salt 2805 ft, dr 4090 ft. Samedan Oil Corp.'s S. B. Hughes 2, c nw se 4-23s-37e, elev 3318 ft, dr 3400 ft. Shell Pet. Corp.'s State 1-T, c se ne 34-20s-35e, elev 3719 ft, dr 3730 ft. Skelly Oil Co.'s J. V. Baker 3, c ne nw 27-22s-37e, elev 3341 ft, td 3425 ft, rust; Hugh C. Sims 1-D, c se nw 3-23s-37e, elev 3300 ft, td 3602 ft, shot 140 qts 3532-82 ft, flowed 53 bbls 12 hrs with 8,000,000 ft gas; R. R. Sims 2, c ne sw 3-23s-37e, elev 3298 ft, sd 1196 ft; R. R. Sims 1-C, c se sw 3-23s-37e, elev 3297 ft, dr 3400 ft; W. P. Sims 1-B, c nw ne 10-23s-37e, elev 3296 ft, td 3600 ft, shot 150 qts nitro 3533-85 ft, co cavings. Stanolind O&G Co.'s C. Myers 1, c ne sw 22-24s-37e, lcn. W. H. Street et al's Wood-Humble 1, near c se ne 22-22s-37e, elev 3355 ft, dr 2275 ft. Sun Oil Co.'s I. R. Stuart 2, c sw ne 15-25s-37e, lcn. The Texas Co.'s Jas. F. Black 1, c sw ne 21-24s-37e, elev 3225 ft, shot 220 qts 3410-3495 ft, complete flowing 17.3 bbls oil per hr via cas; J. P. Alexander 1, c lot 14, 5-21s-37e, rig; V. M. Henderson 1, se se ne 30-21s-37e, elev 3490 ft, td 3820 ft, shot 200 qts 3725-3820 ft, running tubing. Tide Water Associated Oil Co.'s Coates 1-B, c nw nw 21-25s-37e, elev 3073 ft, pb from 3077 ft to 3037 ft, failed cut off water.

ROOSEVELT COUNTY—Clovis Dev. Co.'s S. Smith 1, c se ne 17-2s-30e, elev 4597 ft, dr 1290 ft. Franklin Oil Corp. et al's Rual Giphant 1, nw nw nw 28-3n-30e, elev 4458 ft, dr 3900 ft. Joe C. Maxwell, R. Crandall and C. H. Osmond's A. B. Williamson 1, c nw nw 7-8s-36e, elev 4149 ft, dr lime 4330 ft.

OKLAHOMA

ATOKA COUNTY—A. J. Sander's Redden 3, se sw sw 19-1n-5e, td 1016 ft.

BECKHAM COUNTY—Mid-American Oil Co.'s Biscoe 1, sw se ne 28-2n-22w, dr 1210 ft.

CARTER COUNTY—Head & Straus' Simpson-Fell 1, nw nw se 8-5s-1e, reaming 1305 ft, td 1464 ft.

CHOCTAW COUNTY—Cooper & Branstetter's Bell 1, cnw ne 29-6s-17e, woc.

CLEVELAND COUNTY — Helmerich & Payne's Glenn 1, cnw ne 6-1n-8w, dr 6314 ft.

COAL COUNTY—Continental's Kirby 1, sw se sw 23-1n-8e, td 2590 ft. Continental's Breedlove 1, nw sw sw 24-1n-8e, fsg 5665 ft. Continental's King 1, ne sw ne 26-1n-8e, PB 830 ft, bailing. Continental's Daniels 1, sw ne sw 27-1n-9e, dr 6414 ft. Carter's Warne 1, ne ne nw 31-2n-9e, sso. Ruwalt & Couch' McMillan 1, sw sw sw 10-1s-8e, lcn.

COMANCHE COUNTY — Frank Scott's Kuntz 1-A, cse ne se 21-4n-11w, td 1840 ft, sg. C. V. Morris Young 1, se ne se 24-3n-10w, sd 660 ft.

COTTON COUNTY—Phillips Pet Co.'s Warren 1, ne ne se 1-5s-13w, sd 3401 ft, hfw. Grace-Wood Drlg Co.'s Wilson 1, csw nw 17-4s-11w, sdo 4218 ft.

CREEK COUNTY—W. J. Sherry's Childers 1, sw sw nw 2-15n-7e, lcn. M. W. Mosier et al's Holcomb 1, se sw ne 19-18n-8e, fsg bailer 2850 ft.

GARFIELD COUNTY—Ohio's McFarland 1, se se se 25-24n-3w, sdo. Arab Oil Co.'s Harkendorf 1, ne ne ne 34-20n-3w, dg pits.

GARVIN COUNTY—Ellison & Hammond's Selby 1, cnw nw 24-2n-3w, dr 6190 ft. Hayes Drlg. Co.'s Howell 1, cse nw 34-1n-1e, rig.

GRADY COUNTY—R. E. Johnson et al's Thomas 1, se sw se 18-5n-7w, mir.

GREER COUNTY—Bud Lewis et al's Webster 1, sw ne ne 7-7n-24w, dr 1958 ft, est 50,000 cf gas.

HUGHES COUNTY—T. P. McAdams & Barnes' Koch 1, sw ne ne 1-9n-10e, sd. R. K. Ellison's Peters 1, se nw se 8-6n-10e, td 4235 ft, to core. Mid West Oil Co.'s Turner-Lucas 1, cse nw 13-9n-9e, dr 1680 ft. Carson Oil Co.'s Lyter 1, ne nw sw 31-8n-12e, dg cel. C. J. Wrightsman's Diamond 1, ne ne se 33-9n-9e, woc 114 ft.

JACKSON COUNTY—Everett & Morgan's Dameron 1, cnw sw sw 34-3n-18w, mach mo.

JEFFERSON COUNTY—Massad & Swansberger's Barrett 1, ne se se 14-6s-6w, dr 1094 ft. Lincoln Oil Co.'s Derr 1, nw nw se 13-5s-8w, dr 2125 ft.

JOHNSTON COUNTY—Patton et al's McCrummens 1, sw sw ne 16-1s-6e, dr 655 ft.

KAY COUNTY—G. A. Brown et al's Harris 1-A, sw sw ne 14-25n-1e, br. Helmerich & Payne's Constant 1, sw sw ne 17-28n-2w, dr 4155 ft. Black Gold Oil Co.'s Cooley 2, sw sw se 25-28n-4e, lcn. Ben Head et al's Bealveal 1, sw sw sw 6-25n-1w, td 50 ft D & A.

KIOWA COUNTY—Nagel & Adams Oster 1, sw ne sw 27-7n-17w, td 930 ft, est 1,500,000 cf gas. Comp. McWherter & Francis' Padgett 1, ne nw se 3-5n-17w, mach, dr 285 ft. Francis & Scott's Doyle 1, ne se sw 21-5n-17w, td 937 ft, D & A.

LINCOLN COUNTY—Mid-Continent Pet. Corp.'s Logan 1, ne ne se 31-11n-5e, dr 1850 ft. Skelly Oil Co.'s Laughlin 1, cse nw 29-17n-3e, rig. Fleetborn Oil Co. et al's Turner 1, nw nw se 28-17n-5e, td 3994 ft, av flow 45 bbls oil daily, 6% water, est 2,000,000 cf gas.

LOGAN COUNTY—Helmerich & Payne's Hasler 1, nw nw se 14-16n-4w, dr 6380 ft. Harry Blackstock's Prince 1, se ne sw 11-17n-3w, dig cel.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, swb 45 bbls oil daily. Magnolia Pet. Corp.'s Gardner 1, cne ne nw 34-6s-2e, dr 2710 ft.

MARSHALL COUNTY—Stewart & Taylor's Chestnut 1, ne ne ne 23-8s-5e, sd 750 ft.

MURRAY COUNTY—Power Oil Co.'s Lancaster Trust Co. 1, csw ne 10-1s-2e, most 3203 ft. Russell's Fee 1, se nw se 9-2s-3e, sd 785 ft.

NOBLE COUNTY—Shell et al's Moelling 1, csw nw 31-21n-2w, SI. Darby et al's Aetna Life Ins. Co. 1, se se nw 1-23n-2w, dr 4250 ft.

OKFUSKEE COUNTY—Okla. Oil Corp.'s Dawley 1, nw nw se 8-10n-9e, td 1886 ft, D & A.

OSAGE COUNTY—Norbla Oil Co.'s No. 1, ne ne se 13-23n-6e, ru mach.

PAWNEE COUNTY—Forest Dev. Corp.'s Otter 1, cne nw 15-21n-5e, rur.

PAYNE COUNTY—H. F. Young's Jenkins 1, se ne se 4-17n-3e, set 12-in csg 210 ft.

PITTSBURG COUNTY—Okla. Dist. Co.'s Beeler 1, ne ne sw 7-7n-14e, fsg.

PONTOTOC COUNTY—Ramsey Pet. Co.'s Johnson 1, nw sw se 9-3n-7e, cor 2098 ft. Delaney & Boettcher O & G Co.'s Alexander 2, sw ne sw 24-4n-7e, sso 4177 ft, to core. E. H. Moore et al's Muse 1, sw ne se 33-2n-7e, rur.

SEMINOLE COUNTY—R. M. Purcell's Gilliland 1, se se sw 24-11n-7e, lcn. H. E. Kennedy's Bowlegs 1, nw nw se 3-8n-7e, td 3463 ft, D & A. Carter et al's Simpson C-48, sw sw ne 7-8n-8e, bldg rig.

STEPHENS COUNTY—Ed Parson's Olson 1, csw nw 32-2s-17w, dr 4422 ft. Shirley Clum Co.'s Johnson 1, csw se nw 1-2n-8w, dr 6172 ft. Edward's Frederick 1, ne se nw 31-2n-8w, dr 2700 ft. Jack Cohen's Pierce 1, cne nw 24-2s-6w, dr 325 ft.

TEXAS COUNTY—Allison & Barnhill's Bingley 1, sw sw ne 30-2n-18ecm, sd.

TILLMAN COUNTY—I.T.I.O. Co.'s Drumm 1, csw nw 32-2s-17w, dr 4422 ft. Shirley Clum et al's Moriele 1, nw nw se 16-4s-14w, sd 2330 ft. D. S. Smith's Hammill 1-A, ne nw nw 6-5s-15w, fsg 2425 ft.

EAST TEXAS

ANDERSON COUNTY — Tom F. Hunter, American Liberty Oil Co. et al's G. E. Gage 1 (160-ac), C. Bird Gilbert sur, Blackfoot structure, Trinity test, cem surface pipe. Tide Water Associated-Seaboard Oil Corp.'s Monnig Bros. 7 (3806.82-ac) Simon Sanchez sur No. 1-11, Long Lake field Trinity test, elev 233 ft, cem 20-inch cas 357 ft. Comer E. Todd et al's W. T. Todd 1 (100-ac), A. B. Patton sur, Boggy Creek area, sd 2450 ft.

BOWIE COUNTY—Ferguson & Hill's A. Y. Breckenridge 1 (412-ac), Nancy Dycus sur, 4 mi w Texarkana, top Nacatoch sand 740 ft, sd 1150 ft. Woodley & Bentley's J. D. Lumpkin 1 (245-ac), John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, Annona chalk 1665-2090 ft, sd 4404 ft.

COLLIN COUNTY—E. A. Parkford et al's Mrs. W. L. Fagg 1 (38-ac), Jas. Rutherford sur No. 4, 2 mi ne Blue Ridge, elev 626 ft, Georgetown lime 1980-2651 ft, tested fresh water with scum oil in Paluxy series at 2661-2771 ft, dry and abd 3514 ft. Port Bolivar Co.'s O. C. Durning-Clarkston 1-A (140-ac), Wm. Creager sur, Pat. No. 1193, 2½ mi n Anna, elev 722 ft, sd 4098 ft; A. Shirley 1 (50-ac), Gwynn Morrison sur, ½ mi e Anna, sp and sd.

DALLAS COUNTY—Mauldin Oil Co.'s W. E. Howell 1 (107.7-ac), S. Layton sur, 8 mi e Grapevine, rig.

DELTA COUNTY—F. J. Estes et al's W. S. McGee 1 (207-ac), J. G. Oliver sur, 2 mi sw Klondike, elev 449 ft, dk. W. S. McGee et al's Mrs. P. W. Miller 1 (52-ac), E. Spencer sur, 1 mi sw Cooper, elev 465 ft, top Woodbine Red Beds 2650 ft, top Georgetown 3040 ft, sd 4220 ft.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac), Dennis Herold League, 5 mi sw Kosse, elev 521 ft, top Edwards lime 3867 ft, top upper Glen Rose 4074 ft, co 4114 ft to deepen to lower Trinity.

FREESTONE COUNTY—C. A. Everts et al's O. W. Killam 1 (840-ac), John Robbins sur, 6½ mi se Fairfield, Red Lake area, elev 368 ft, Pecan chalk 3507-3718 ft, dr 4040 ft. Fred R. Lovering et al's E. Bonner-Scott 1 (23-ac), H. Awalt sur, 7 mi n Fairfield, Pecan chalk 2175-2286 ft, top Austin chalk 3117 ft, sd 3870 ft. R. L. Wheelock, J. L. Collins et al's W. R. (Bill) Boyd, Jr. 1 (410½-ac), F. P. Cabler sur, 3½ mi sw Fairfield, elev 425 ft, Pecan chalk 2744-2813 ft, broken chalk to 2835 ft, Austin chalk 3630-4002 ft, dry and abd in sw sand 4511 ft.

GRAYSON COUNTY—Olson Drlg. Co., Jas. H. Gardner, Broswood Oil Co. et al's D. R. Utiger 1 (160-ac), P. P. Cady sur, 5 mi nw Denison, elev 722 ft, show o&g in Trinity 860-890 ft, base Trinity series 930 ft, top Woodford chert 955 ft, top Viola cherty-lime 1570 ft, top Stringtown shale 1854 ft, top lime 2415 ft, dr 2580 ft.

HOPKINS COUNTY—Empire O&R Co.'s J. E. Worsham 2 (149.36-ac), A. O. Wetmore sur, Sulphur Bluff area, elev 436 ft, dr 4400 ft. Walter L. Goldston & Frankel Bros.' H. J. Smith 3 (450-ac), Jas. A. Craft sur, elev 436 ft, sp. D. S. Hager and W. P. Luse's J. G. Reynolds 2 (200-ac), A. O. Wetmore sur, elev 426 ft, dr 4000 ft. D. S. Hager, Luse and Russ Pet. Co.'s J. E. Worsham 8 (192.26-ac), A. O. Wetmore sur, elev 442 ft, dr 3800 ft; Jeff M. Worsham 2 (39.82-ac), A. O. Wetmore sur, mim. F. D. Jones Drlg. Co. et al's Mrs. J. K. Pierce-Gulf 7 (225-ac), Jas. A. Craft sur, elev 447 ft, completed in Paluxy pay 4474-4526 ft, no gauge; Pierce-Gulf 2, mim. Shell Pet. Corp.'s J. G. Reynolds 1 (200-ac) A. O. Wetmore sur, lcn.

HOUSTON COUNTY — E. R. Mount, Branch et al's Dr. P. S. Griffiths 1 (136-ac), Frank Johnson sur, 3 mi sw Crockett, sd 700 ft.

HUNT COUNTY—Penn Oil Corp.-Elmer S. and Fox Wood's A. B. Manning 1 (57½-ac), Sally Owens sur, 5 mi ne Lone Oak, elev 599 ft, dk. Stanolind O&G Co., M. J. Delaney et al's L. B. Moore 1 (92-ac), R. Ragsdale sur, 2½ mi w Campbell, lcn for Trinity test. Superior Oil Co. (Cal.), Moncrief & Showers, Inc., Ed Hyde and W. L. Pickens' P. B. Paul 1 (160-ac), Mary Latham sur, 5 mi ne Quinlan, Trinity test, elev 489 ft, cem surface pipe. Texola Land Corp.'s J. M. Goin 1 (250-ac), J. Merrick sur, mim.

LAMAR COUNTY—H. Salmon, Lowery & Cutler's E. C. Porter 1 (30-ac),Thos. King sur, 3 mi ne Chicota, elev 421 ft, Woodbine series 168-242 ft, top Georgetown lime 354 ft, sd 1050 ft.

LEON COUNTY—H. M. Ogg et al's O. Wiley 1, E. Devinney sur, 1 mi w Buffalo, dk. Roth & Faurot O&G Co.'s J. L. Shaw 1 (254-ac), O. R. Reams sur, 5 mi n Centerville, top broken Pecan chalk 4065 ft, base chalk 4290 ft, top Gober chalk 4860 ft, Austin chalk 5150-5390 ft, tested dry, sd 6132 ft.

LIMESTONE COUNTY—A. W. Phillips, J. Johnson et al's E. M. Speight (136½-ac), M. Herrin and Pedro Varella sur, 4 mi ne Groesbeck, top Austin chalk 2720 ft, coring 3505 ft.

RAINS COUNTY—Humble O&R Co.'s O. L. J. Easter 1 (39¾-ac), R. Hotchkiss sur, 4½ mi e Emory, elev 438 ft, Pecan chalk 2185-2435 ft, Austin chalk 3424-3745 ft, top Woodbine 4225 ft, top sand 4380 ft, top Washita 4970 ft, top Georgetown 5003 ft, top Paluxy series 6079 ft, tested water, top upper Glen Rose lime 6347 ft, top anhydrite 6985 ft, dr broken anhydrite 7500 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Southern Pine Lumber Co. 3 (392.37-ac), D. D. Bruton sur, 11 mi ne Clarksville, elev 403 ft, td 2311 ft, jkd and abd. Carpenter Oil Corp.'s R. E. Anderson 1 (100-ac), S. W. Sims sur, 3 mi n Clarksville, elev 459 ft, top Red Beds 1250 ft, sd 1835 ft. Roy I. Carter Drlg. Co. et al's J. A. Tutt 1 (40-ac), Dennis Harty sur, 2 mi s Avery, elev 440 ft, sp and sd. M. Petroff et al's R. C. Morris 1 (176-ac), Joseph Guest sur, 2 mi w Detroit, sp and sd. Dale Sneed, R. H. Manning & Texfornia Co.'s Hooker-Hughes 1 (80-ac), MEP&P Ry. sur No. 642, 6 mi sw Lydia, elev 297 ft, Pecan chalk 995-1302 ft, top Austin chalk 2018 ft, sd 2720 ft.

ROBERTSON COUNTY—J. Edward Mills et al's Tony Congelosi 1 (75-ac), Geo. A. Nixon sur, 3 mi sw Hearne, jkd 2250 ft, skid rig.

RUSK COUNTY — Ben E. Lamb et al's Haywood-Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e Pirtle, elev 370 ft, Pecan chalk 2468-2793 ft, Austin chalk 3352-3512 ft, sd 4740 ft.

TITUS COUNTY—J. V. McMahon, Geo. H. McIntyre et al's John B. Stevens, Jr. 1 (777½-ac), J. Muechen sur, 7 mi sw Mount Pleasant, elev 349 ft, Pecan chalk 2290-2600 ft, sd 4200 ft.

WOOD COUNTY—G. W. Nix et al's Mrs. E. A. Russell 1, John Delap sur, 4 mi w of Golden, sd 600 ft.

SOUTH TEXAS

ARANSAS COUNTY—Atlantic Ref. Co.'s McCampbell Ranch 2-C, c lease, lot 9, sec 40, McCampbell Ranch sub, McCampbell area, ru. Barnsdall Oil Co.'s Kate Edwards 1, 80 ft wl, 330 ft sl outlot 87, Lamar Townsite, Wm. Lewis sur, 96, 9 mi ne Rockport, dr 6425 ft.

ATASCOSA COUNTY—Frontier Oil Co.'s D. & A. Oppenheimer 1, 193.4-ac tr, J. Sharp sur No. 518, 6 mi s Lytle, sd 1610 ft, will redrill next week. Helvetia Oil Co.'s Susie Pratt 2, 176-ac tr, F. de la Garza sur, Anchorage prospect, ½ mi se Pratt 1, top serpentine 3085 ft, soft broken serpentine 3224-66 ft, top Austin chalk 3428 ft, pb 3250 ft, perf liner 3150-3208 ft, apparently poor shot, still cleaning out, may shoot again. L. G. Priest, Tr.'s John Sanders 1, 117.61-ac tr, J. P. Garman sur No. 1189, still sd, 1160 ft.

BANDERA COUNTY—A. T. Crane et al's R. B. Watson 1, A. C. Curver sur No. 71, 2 mi n Medina City, td 2035 ft, black shale, sd.

BASTROP COUNTY—Illinois Pet. Corp.'s W. H. Hill 1, 120 ft nel and 1000 ft sel (Highway) of tr in J. A. Navarro sur, 6 mi n Cedar Creek, serp 1101-1414 ft, abandoned. Joe E. Mills' Chas. W. Eskew 1, 600 ft nwl, 1525 ft swl, Chas. W. Eskew 298.5 ac tr, Samuel Wolfenberger sur No. 18, td 2904 ft, set 5-in cas at 2458 ft, pb to 2458 ft and testing, sd.

BEE COUNTY—Benson & Jones' Geo. A. Ray 1, 40-ac tr, Anna Burk sur, 3 mi e Beeville, old well still sd 4910 ft in sdtr hole.

BEXAR COUNTY—Algra Oil Co.'s Edward C. Peters 1, Miguel Gotari sur 5, sec 4, 13 mi se San Antonio, still sd 670 ft, American Gas Co.'s Oliver 5, 400-ac tr, M. F. Rodriguez sur, Gas Ridge, td 3415 ft, ur 5 3/16 in cas to lower, hole full of water. W. D. Bacon et al's Ida Mae Seffel 1, 350 ft wl and 650 ft nl, 29-ac tr in Jose Arocha sur, 2500 ft n Cooksey pool, 1100 ft se Meaders prod, dk. Albert Chmel's Theresa McIntosh 1, 274-ac tr, J. W. Garrity sur No. 19, ¾ mi se Kirby, still sd 485 ft. J. H. Devine et al's Victor Galla 1, 100 ac tr, Jose Bustillo sur No. 29, 1½ mi e Hange and Donnell, Mahula, td 255 ft dr, 6¼ in cas at 84 ft, sp 12-23-36. Eckert & Son and W. W. Kelley's W. Barkmeyer 1, 586-ac tr, Villepando sur, near Hildebrand rd, 12 mi e and s of San Antonio, dr 1140 ft. L. K. Oil Co.'s Earl Baker 1 (was Caruth), 1800 ft wl, 1300 ft s of river in 420-ac lse, J. Rolen sur, 1 mi s of Von Ormy, lcn. L. K. Oil Co.'s J.

F. and F. X. Bilhartz 1, 150 ft el, 600 ft sl of 382 ac tr in F. Rolen sur 48, 1 mi s of Von Ormy, lcn. Woodward, Hardie & Herrold's Herman Sons 1, 2019-ac tr, Henry Pace league, sur 37, tr 9, Swearingen, Cassin & Tayloe subd, 28 mi s San Antonio, sd 1645 ft.

BROOKS COUNTY—The California Co.'s Mestena O&G Co. 1, Alta Mesa area, B. Garcia tr 5, La Mestena de Gonzalina gr, dr 3411 ft; B. Garcia 3-2, tr No. 3, La Mestena de Gonzalina gr, Alta Mesa area, sand 2451-58 ft, 7 in cas 2451 ft, complete, jetted 1300 bbls in 19 hours, sand 2450-58 ft. Douglas & Burden, Inc.'s M. A. Faller 1, G. M. Laughlin sur No. 434, Alta Verde, 1¼ mi se prod, still stdg 900 ft.

BURLESON COUNTY—M. R. Exploration Co., Inc.'s J. M. Fountain 3, 936-ac tr, blk 2-47 of W. Raleigh sur, 700 ft e No. 2, 12 mi ne Caldwell, lcn. Red Bank Oil Co.'s Nellie Gramm 1, Elisa Santef sur, abt 2500 ft nw Co.'s Gramm 1, 7 mi w Creisman, td 6241 ft, top Edwards 6226 ft, 5 in cas 6223 ft, swabbed down 4700 ft, fluid level rose 1000 ft in 12 hrs, all salt and sul water with scum of oil, light gas blow, attempted to set packer but stuck in hole, now fsh will later pb to 4000 ft sand in Navarro shown on electrical formation tester.

CALDWELL COUNTY — Brown Drilling Co.'s W. J. Pope 2, Salt Flats area, 134-ac tr, John D. Rains sur, 8 mi se Lockhart, 500 ft e Pope 1, lcn; G. M. Blackwell 1, 409-ac tr, John Row sur, 1500 ft W. Grayburg's Blackwell 1, 7 mi sw Lockhart, td 2191 ft, set 6 inch cas 1911 ft, swabbed down 1700 ft through tubing, stood 12 hrs, fluid level rose 550 ft, pulled tubg, bailed down, found mud in btm of hole, still bailing, fluid all oil. McKenzie's J. M. Pierce 1, S. Seal league, s of Luling, Dulap area, sd 150 ft. R. George Young, Trustee's Lena Schmidt 1, W. C. Williams 1/3 league, 3 mi w Lockhart, still sd 70 ft.

DUVAL COUNTY—Argo Oil Co. & John Clopton's Smith-Corkill Est. 1, center e ¼ sur 61 (N. Munez sur) 447-ac lse, 2 mi s Hoffman field test 2839-46 ft, show 550 ft mud and sw. A. J. Brinkoters State sur 215, ½ mi s of field, dr 200 ft. Gilcrease Oil Co. and Tom Graham's M. S. Escobar 1, blk 4, sec 2, 829.5 ac tr, Juan Jose Manuel de la Garza Falcon gr, Buffalo, Tex. subd, 2 mi sw Premont area, dr 3200 ft. Hiawatha Oil & Gas Co.'s Southland Life Insurance Co. 1, sec 15, Agua Poquita Fr, 6 mi s Benavides, dr 3000 ft. Magnolia Pet. Co., C. W. Hahl 1, Hahl tr, sur 41, 1 mi n Loma Novia sand prod in Gov't Wells field, dr 2346 ft. A. L. Labbe 2, sec 1, H&GN RR sur, 2360-ac lse, 1 mi n Labbe field, ru. Oliver Oil Co.'s K. Shaffer 1, s¼ sur 146, sd unable to comp water well. Albert Plummer et al's Herman Danmier 1, ne¼ sec 58, Copeta Garden tracts, addn No. 4, 9 mi s Realitos, sd 3175 ft. Porter & Blanchard's J. T. (Amos) Dinn 1, 330 ft nl and el sec 462, 6 mi n Cole field, dr 2300 ft. Smith & Hamil's J. Benavides 3, sub 2, El Mesquite gr, 6 mi se Bruni, dr 3400 ft. J. Elmer Thomas et al's J. B. Peal 1, sur 794, 1 mi e Lopez field, top sand 2243 ft, no show, abnd below 2550 ft.

EDWARDS COUNTY—Plateau O&G Co.'s Mrs. R. L. Hatch 1, J. W. May sur, sec 66, HE&WT RR sur, td 4750 ft, still sd at contract depth.

FAYETTE COUNTY—McNeil Pet. Co.'s V. Dybala 1, 1056 ft nwl, 150 ft nel, 79-ac tr, A. Thompson league, 2 mi se Fayetteville, ru and sd.

FRIO COUNTY—Amerada Pet. Co.'s Halff & Oppenheimer 7, E. J. Gilman sur, Pearsall, td 5573 ft, set 5 in cas 5237 ft, co at 5320 ft, hole full of oil, rig moved off. Halff & Oppenheimer 8, San Antonio Ditch Company sur No. 1104, Pearsall, td 6230 ft, set 9⅝ in cas, blew in dry gasser, est 15 to 25 mcf gas, top Edwards, cas below 6228 ft, lost tools and dr line, sd.

GOLIAD COUNTY—R. B. Swiger's Carrie Wood 1, blk 23, Swiger subd, Wood Ranch, George Villa sur, 15 mi s Goliad, 2 mi e Keystone's Wood 1, mim.

GONZALES COUNTY—M. S. Holliday et al's T. G. Edwards 1, W. W. Pace 1/3rd league, blk "A" Holliday subd, 3 mi sw Cheapsides, 933 ft, sd.

GUADALUPE COUNTY—W. D. Bacon et al's O. D. Halm 1, Joseph Kent sur, 2 mi s Kingsbury, td 1903 ft in Buda, sd top chalk 1652 ft, temp abnd, rig moved off, poor titles. Louis Crouch et al's Mary E. King 1, 80-ac lse, J. D. Clements sur, ¼ mi se Zaboroski area, dr 1100 ft corrected depth. La Jita Corp.'s Dan Denman 2, midway between S. Darst Creek and Darst Creek field, dr below sur csg. W. W. Lincoln et al's A. Baenzinger 1, 125-ac tr, A. Mansola sur, Salmar area, 6 mi s Seguin, dr 1400 ft. Long & Ross' Ed Felix 1, 1½ mi s fr New Berlin, 75-ac tr, V. Duran sur, sd 634 ft. Nick Manosis et al's William Maierhofer 1, 100-ac tr, L. A. Peters sur, 12 mi sw Seguin, dr 225 ft. Riddle Oil Co.'s E. Nolte et al 1, J. Sowell sur, 6 mi e Seguin, td 1280 ft, pb 185 ft, treated with 4000 gals, complete on pump, no gauge, opens Nolte field.

HAYS COUNTY—R. D. Kelly's W. P. Donalson et al 1, 105-ac tr, J. Vermandi gr, 1½ mi ne San Marcos, top Edwards 718 ft, stilled 721 ft. Mallory-Holcomb & Nance's J. A. Hudenrich 1, 496-ac tr in W. Hemphill sur, 2 mi se of Kyle, lcn.

HIDALGO COUNTY—Pantano Oil Co.'s (McCollum Exploration Co.), John C. Engleman, Jr. 1-B, lot 3, sec 259, Tex-Mex Ry. sur, La Mestina gr, 1½ mi se Pantana gasser, td 6805 ft, set 7⅝ in csg, dr 7000 ft. James McDougal 1, lot 223, blk 1, La Blanca tr, 1½ mi s Pantana gasser, coring below 7800 ft. Sun Oil Co. (H. J. Porter et al's) Sweeney Est. 1-A, lot 1, Wayne Wood subd, No. 1, 6 mi sw Donna, oil sand 5962-75 ft, coring 6230 ft. Dayle L. Smith Oil Co.'s Fairbanks and Young 1, blk 44, porc 46, 4 mi e Samfordyce field, stdg at 1950 ft. Union Sulphur Co.'s Argl & I Co. 10, blk 50, N. Capisallo dist, Mercedes area, td 8306 ft, set cement plug 7530-50 ft, sdtr at 7535 ft, stdg 8306 ft.

JIM WELLS COUNTY—J. I. Francis and L.A. Simonton's A. Lonzano Jr. 1, lot 111, sec 76, Holdeman sub, Seeligson ranch, 4000 ft sw Graham's Bennett 1, sd 1272 ft. Gist & Graddy's B. W. Owens 1, Poitevent sur, 3 mi n Bentonville field, still sd 5308 ft. La Jita Corp.'s Frame & Bowers 1, sec 14, King Ranch sub, deep test Bentonville field, complete, flowing 8 bbls hr, ⅛ ch, tp 725 lbs, cp 950 lbs, gas/oil ratio 485/1. Stanolind O&G Co.'s Richard King 3, sec 20, but sec 9, Richard King sub, one mile n Bentonville field, lcn.

JIM HOGG COUNTY—French Oil Co.'s Paula V. de Garza 1, sur 269, east of Alworth pool, sp. Gifford Oil Co.'s Armstrong, 330 ft el, 1650 ft sl of sur 43, lcn sw La Salle City.

KARNES COUNTY—De Garaffe & Reel's Cochran 1, McConnel league, 5 mi ne Riddleville, sd 200 ft.

KERR COUNTY—S. W. Forrester's J. W. Bailey 1, A. L. Starky sur No. 408, 3 mi n Ingram, td 630 ft, no report.

LAVACA COUNTY—Willshire Union Oil Co.'s Albert Pohl 1, 120-ac tr, M. Wooten sur, 7 mi nw of Ezzell, sd 1850 ft.

LA SALLE COUNTY—Gifford Oil Co.'s Armstrong 1, 330 ft el, 1650 ft sl of sur 43, lcn. Kennedy & Johnston's Gilmer & Wildenthal 1, 140-ac tr, sur No. 283, Santonis Carrasco sur 28, 8 mi se Cottula, dk and sd. W. H. Vernor's M. C. Jefferies, sec 726, HE&WT RR sur, 10 mi se Artesia, still sd 850 ft.

LIVE OAK COUNTY—J. H. Durbin's J. D. Marback 1, 429-ac tr, Stephen Hays sur, 2½ mi sw Whitsett, still sd at 922 ft. Hagan & Stewart's S. A. Joint Stock Land Bank 1, J. Turner sur, 5 mi — and n of Three Rivers, td 865 ft, gas sand 546-53 ft, 860-865 ft, to have set 5 in liner to btm. Martell Pet. Co. & Sterretts Whitsett, Townsite 1, center blk 55 in Juan Houghlingan sur, at Whitsett, abnd 1040 ft. V. G. Schimmel's Geo. West Est. 1, 160-ac tr, J. Poitevant sur 231, 3½ mi sw Geo. West, sp. Jack Sterrett et al's Border National Bank 1, 250 ft se and 150 ft ne of e cor of 100-ac Brown tr, but in Border National 228-ac tr, S. Hays sur, 1½ mi sw Whittsett, mim.

LEE COUNTY — Eleoussa Oil Co.'s Ira Sanders 1, 102-ac tr, J. Von Roeder sur, abnd 2500 ft. James E. Pederson's C. A. Turner 1, D. Hudson sur, 1½ mi se Tanglewood, td 6560 ft, dr 5373 ft in sdtr hole.

MAVERICK COUNTY—J. W. Boicourt's Edson & Estrada 1, James Eaves sur 68, 12 mi n Eagle Pass, sd 1720 ft. Rio Development Co.'s 1, Winchester Kelso, 294-acres in sur 2, 3 mi ne of Eagle Pass, td 1003 ft, sd.

McMULLEN COUNTY — Humble Oil & Ref. Co.'s H. C. Edrington 3, n½ of A. B. sur 55, 2 mi ne No. 1 Edrington, dr 420 ft. Edwin N. Jones' Harry Ezzell 1, 160-ac tr, sec 3, Ezzell Ranch subd, Thomas Adams sur, 5 mi nw Simmons City, blew out 1240 ft, sd, rig moved off. Edwin M. Jones' Harry Ezzell 2, 330 ft wl, 990 ft nl of 160-ac tr, sec 13, Patrick Fadden sur, 4 mi sw Simmons City, 2 mi s No. 1, ru.

MEDINA COUNTY — Frank A. Brown's Jack Bilhartz 1, 200 ac tr s part of sur 24, J. Campbell sur, 12 mi se Hondo, Texas, dr water well and ru. Joise Oil Co.'s Medina Irrigation Farms 1, lot 1, blk 32, sec 7, Medina Irrigated Farms subd, 1½ mi e Devine, td 1852 ft, sand 1726-38 ft, fresh water with show gas, abandoned. R. P. & E. P. Ruhmann, Sr.'s E. B. Chandler Est. 1, 380-ac tr, Chas Decher sur 461, abnd 930 ft. Whitfield's W. M. Odem 1, Henry Castro sur No. 177, ne of Taylor field, sd 810 ft. G. Whitting et al's Hondo Nat'l Farm Loan 2, sec 214, Geo. Studer sur, ½ mi ne Hondo, abnd 1205 ft. Will A. Wycoff's T. J. Bendele 1, 321.5-ac tr, James Barnhart sur 593, ab 1733, — mi s De'Hanis, abnd 212 ft. F. J. Bendele 2, 1880 ft el, 200 ft sl of 320-ac tr, sur No. 117, 9 mi sw Hondo, sd 215 ft, woc.

NUECES COUNTY—I. J. Allen & Seaboard Oil Corp.'s J. D. Chapman et al 1-A, sec 40, Laureless Farm tracts, 15 mi sw Corpus Christi, old well, dr 5754 ft, sw sand. R. B. Bryant and H. H. Howell's Antone Kocurek 1A, 58-acres of s 113 acres of 172.5-ac tr, J. H. Smith sur 25, 1 mi s Clarkwood, relief well to wild crater, set 16-in csg at 200 ft. Al Buchanan and Blanco Oil Co.'s W. S. Gandy 1, e½ sec 60, George H. Paul subd, 1 mi n Clara Driscoll field, dst 5810-47 ft, 10 min 500 pres, 30 ft mud and red gasoline, cored 5895-5904 ft, small amount saturated core recovered, making dst. Camp Prod. Co.'s C. Phillip Wardner, Tr. (was Chas. E. Stratton) 1, Stratton area, wo fuel to sp. Hiawatha Oil Co., Mrs. N. J. Griffith 6, Frank sur No. 416, Saxet, reaming gasoline sand 6725-59 ft, 7-in cas 6770 ft, comp 150 bbls day, ⅛ ch, cp 1050 lbs, approx. 148 gravity. Lockhart Bros. Mable Eliff 1, 3054.9-ac tr, Antone Longaria sur, 1 mi sw Texon Eliff 1, dr below surf csg. N. S. Moss et al's R. H. Coleman 1, of 320-ac tr, sec 226, Bishop subd, Palo Alto gr, s of Agua Dulce field, gas sand 6878-82 ft, ds stuck, showing 2500 lbs gas pres inside of ds. Phillips Pet. Co.'s Rand Morgan 4, sur 105, Saxet field deep test, td 6740 ft, set 7-in csg 6428 ft, perf 5825-28 ft, water seeped in, will re-cement. Sloan-Harvey & Green River Oil Co.'s Eno Cassers 1, 330 ft wl, 2000 ft nl, sec 26, Agua Dulce farm lots, Benton Pasture subd, Antonio Longoria gr, 1 mi s Agua Dulce townsite, ru. Sta-Mex Oil & Gas Co. Inc.'s Oliver Bird 1, E. R. Oliver sur No. 162, 3 mi w Baldwin field, set sur cas, still wocs; Cox & Cryer 1, 72-ac tr, Ward & Callagher sur No. 316 and 166, sd 4000 ft, still no water. Teague and Associates' A. M. Poenisch 1, lot 2, blk 32, Flour Bluff and Encinal Garden tracts, 3 mi w Flour Bluff field, oil well orig abnd by Hueburt et al, running electric formation tester. Texon Dr. Co.'s Clara D. Sevier 2-B, relief well, 880-ac tr, W. W. Chapman lands, Palo Alta gr, S. Agua Dulce, set 350 ft 16 in cas, still sd for heavier rig. Mable Eliff 1, 3054-ac tr, A. Longria sur, S. Agua Dulce, td 6547 ft, sd still wor. United Prod. Corp.'s W. H. Harvey 1, most northwesterly cor of 162.34-ac tr, Garcia sur, Chapman subd, Palo Alto gr, ½ mi sw prod of Agua Dulce field, dr 3273 ft. Wellington Oil Co. and Pan-American Prod. Co.'s Clara Driscoll Sevier 1-A, Wm. Gamble sur, se of Clara Driscoll field, td 6075 ft, set 5 in cas to td, perf 5425-30 ft, came in under own power, flowed distillate and gas, cp 2050 lbs., tp 1650 lbs, ⅛ ch, sw broke in, flowed 4 tr, 5 bbls of distillate per hour, made squeeze job with 50 sacks, will perf 5420-25 ft; Myrtle L. Stockton 1, ne¼, sec 25, Laureles Farm Tracts,

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Ramon de Ynojosa sur, 12 mi sw Corpus Christi, td 7005 ft, 5½ in cas 6227 ft, swabbed sw through perf 6150-56 ft, test sw 5564-70 ft, set plug 4910 ft, perf 4885-92 ft, testing.

REAL COUNTY—Sun Oil Co.'s Dietert & Oppenheimer 1, sec 7, GWT&P RR sur, 20 mi nw Leakey, dr 2875 ft.

REFUGIO COUNTY—Paul Meader's Temple Lumber Co. 1, sec 1, G. W. Maine sur, ab 218, 2 mi sw Austwell, set 10-in sur pipe at 872 ft. Windsor Oil Co.'s G. W. Bissett 1, John Crockett sur, 1 mi nw Tivoli, dr 2850 ft. Wynn Drlg. Co.'s Mrs. C. D. Roache 1, John Patrick, Thomas and Jas. Douney sur, center blk 15, Morgan Bros. subd, 8 mi sw Woodsboro, lcn.

SAN PATRICIO COUNTY—W. B. Craig's A. E. Nelson 1, s½ sec 7, first add Taft Farm Lands, 2 mi sw Taft field, sd. Eleanor Oil Co.'s W. W. Toland 1, 8000 ft n Kline 1, lot 15, blk "A," Coleman-Fulton Pasture subd, 2½ mi e Gregory, dk and sd. Golding & Fearis' Turner Bros. 1, blk 6, Masterson subd, Turner Ranch, Samuel M. Edward sur, 4½ mi w White Point, 3 mi se Odom, dr 2800 ft. Hooper & Rutherford, Inc"s J. D. Willis 1, Gregory area, T. T. Williamson sur, e offset to Eleanor's Kline 1, abnd 9213 ft. J. D. Williams and L. A. Douglas' F. D. Kokernot 1, 90 ac tr, sec 19, Paul subd, lcn.

STARR COUNTY—Howard Bass' Hayden et al 1, s½ blk 4, sur 7, porc 80, 5½ mi ne Rio Grande City, td 1444 ft, pb to test 1309-13 ft. F. Davenport and Slick Urschel's T. B. Slick Est. 1, sec 485, 20 mi ne Rio Grande City, sand 5570-89 ft, sd for repairs, top Jackson 5560 ft. E. A. Graham's Yturria et al 1, 230 ft sl and el 29.96-ac tr, por 100, 1500 ft n of west end Samfordyce field, sd 2999-3002 ft sd woo. Moss and Heard's S. B. Ricaby 1, por 83, 6 mi ne Rio Grande City, oil sand 1307-20 ft, setting 7-in to make prod test. Sun Oil Co.'s J. F. Orr 1, M. Gonzales sur, 4½ mi s Cuevitas field, td 3517 ft, setting oil string to 2500 ft for prod test of oil, sd at 2219-35 ft.

VICTORIA COUNTY—Magnolia Pet. Co.'s Willie Beck 1, T&NO Ry. sur No. 1, 4½ mi nw Telferner, td 4812 ft, pb to 4112 ft, 7-in csg set 4100 ft, flowed gas, ¼ ch, tubing pressure 1300 pounds, salt water broke in, squeezed 30 sacks cement in btm of hole. Plymouth Oil Co.'s J. J. Welder 1, Samuel Belding sur, 7 mi e Nursery, td 6648 ft, sdtr hole, dr ahead.

WEBB COUNTY — American Texas Oil Co.'s Wm. McKendrick 1, por 46, near Rio Grande river, dr 2268 ft. Frank J. Gravis' Armando Villareal 1, 330 ft n and w of n cor sw 525 and on sur 2260, ru and sp. Kirkwood & Margan Frost Nat'l Bank 1, 33 ft sl, 990 ft el sur 734, sp and set sur pipe. Lutex Oil Co.'s Lone Star Con. 1-A, blk 26, SS&B sub, por 12, dr 1420 ft. Paul Meaders' F. C. Garcia et al 1, e¼ sur 1101, 2 mi n Mirando City, sp. Rowan & Hope's A. M. Bruni 1, blk 2, sec 857, 5 mi se Mirando City, td 3440 ft, abnd. Smith and Taggart's sur Jones 1, sec 674, Rubk Transportation sur, 12 mi ne Mirando City. lcn. Wilcox O&G Corp.'s Puig Bros. 1, sec 9, Loma Blanco Pasture of Joaquin Galan gr, sur 2183, dr 4300 ft.

WILLACY COUNTY—Ruiz-Morton, Inc.'s Francisco Armendioz center lot, Lettle sh 4, San Juan de Carricitos gr, ru for 7500 ft test. Ruiz-Morton, Inc.'s Johnson-Stilman 1, 60 ft nl, 200 ft el, lot 14, blk 25, sh 44, San Juan de Carricitos, lcn.

TEXAS GULF COAST

AUSTIN COUNTY—W. H. Mitchell's Fenner 1, J. Fitzgibbons sur, dr shale 3878 ft.

BRAZORIA COUNTY—Beaty, Bowles & Borsodie's Truska 1, Algoa prospect, H&TB sur No. 6, running an electrical logging device at 9006 ft. Bunte Oil & Gas Co.'s Fite 1, Sandy Point prospect, D. Talley sur, dr shale 6374 ft.

CHAMBERS COUNTY—Laverne Decker's Johnson 1, ne of Anahuac, T&NO sur No. 30, abn 7664 ft. Salt Dome's Lawrence 1-A, Cotton Lake area, S. Barrow sur, perforating from 6527 to 6529 ft. Sun's White Estate 2, Seabreeze prospect, T&NO sur, sec 128, woc 8755 ft.

HARRIS COUNTY—B. A. Farrell and J. B. Cox et al's Bender Estate 1, w of Humble field, M. W. Travis sur, sd 700 ft. Geo. Lawrence's Zapp 1, Bammel area, J. Farwell sur, sd 6525 ft. Stanolind's J. Warren Minerals 1, Hockley dome, H&TB sur No. 1, dr shale 1660 ft.

JEFFERSON COUNTY—Humble's Jefferson Land Co. 1, Cheek prospect, C. Hillibrand sur, woc 125 ft. Sun's Hebert Broussard 2, Labelle prospect, W. B. Burton sur, testing csg 8217 ft.

MATAGORDA COUNTY — Continental's Robbins 1, Citrus Grove prospect, C. Franz sur, dr shale 5077 ft. Hammond Exploration's Croker 1, South Bay City area, E. Hall sur, preparing to test around 9370 ft. Strake's Sargent 1, Poole Ranch area, L. E. Parker sur, dr shale 6223 ft. Sun's Craig 2, Hawkinsville area, J. Williams sur, dr shale 2944 ft. United North & South Dev. Co.'s C. Q. Stoddard 1, sw of Buckeye field, J. B. & M. Cotton sur, ru. Mayo, Smith & McDaniel's Calhoun 1, Ashwood prospect, D. Rawls sur, woc 1400 ft.

MONTGOMERY COUNTY—W. W. Chapman's Foster 1, Willis area, D. Pevehouse sur, dr shale 3205 ft.

POLK COUNTY—Peyton Brother's Kirby West 1-B, Ace area, J. S. Thomas sur, killing well at 4898 ft.

TYLER COUNTY—Republic's Hurd Fee 1, se of Spurger field, N. Hurd sur, dr shale 8007 ft.

WASHINGTON COUNTY—Smith & Schlenker's Hoddle 1, nw of Brenham, J. Clark sur, dr shale 986 ft. Sun's Lauter 1, Clay Creek, N. Clay sur, dr shale 7779 ft.

WHARTON COUNTY — Plummer & Felmont's L. Logue 1, Spanish Camp prospect, S. F. Austin sur, No. 3, dr shale 1963 ft.

UTAH

EMERY COUNTY — California Co.'s Unit A-1, cnw nw 27-23s-11e, dr 226 ft.

GRAND COUNTY—Columbia Crude Corporation's Rath-Government 1, ne sw ne 12-25s-20e, dr 1936 ft. Utah-Southern Oil Co.'s Hyde-Government 1, s nw nw 32-22s-2e, dr 5938 ft.

WYOMING

ALBANY COUNTY—Hal Blakeman's Chappel 1, cne nw 3-21n-76w, dr 1721 ft.

CARBON COUNTY — Medicine Bow Oil Co.'s Hintze-Government 1, cne se 18-22n-78w, preparing to deepen to test two lower Sundance sands.

CONVERSE COUNTY—Wyoming-Southern Oil Co.'s Salisbury 2, nec nw se 27-32n-69w, dr 321 ft.

GOSHEN COUNTY—Ohio Oil Co.'s Red Cloud Cattle Co. 1, ne nw 28-29n-62w, dr water wells and moving in equipment.

LARAMIE COUNTY—Amerada Petroleum Corporation's Morton 1, csw sw 13-13n-68w, dr 8130 ft in black shale formation.

PARK COUNTY—General Petroleum Corporation's Government 1, nw nw nw 33-47n-100w, dr in lime at 5600 ft.

PLATTE COUNTY—Dividend Oil & Refining Co.'s Government 1, csl nw sw 17-24n-68w, dr 1953 ft.

WESTON COUNTY — Conway Oil Co.'s Government 2, se ne nw 7-41n-60w, spd.

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ENGINE JACKET WATER COOLERS
Young Radiator Company

Young Radiator Company, Racine, Wisconsin, has introduced a new line of engine jacket water coolers. These are applicable for use in cooling any type engine using gasoline, gas or oil as fuel. They were designed to provide a recirculating cooling system to operate with any type of jacketed stationary or portable engine. The manufacturer claims they eliminate cooling towers and the waste of cooling water circulated by pipe lines.

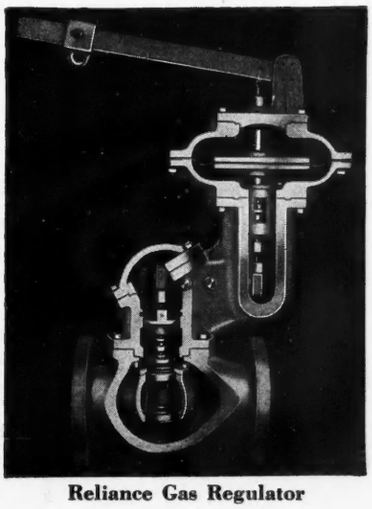
The standard units consist of cooling core, fan, drive sheave and shrouds which are essential to all installations. Many accessories to meet unusual conditions are available.

GAS REGULATORS
Reliance Regulator Corporation

Reliance Regulator Corporation Division, American Meter Company, has announced a new line of gas regulators, featuring an improved combination balanced valve (CBV) unit on which the company's engineers have been working for some time. The new line offers numerous interesting advantages, including interchangeability of parts, a unit construction that facilitates any necessary repair, reduced motion and friction, and greater accuracy in regulator control.

A full range is presented of lever weighted, spring loaded and pilot models of both offset and direct connected types; either reducing or back pressure regulators, affording many different combinations in assembly. Standard sizes—from the straight 2-inch, 3-inch, 4-inch, up to 10-inch—will shortly be available; the smallest orifice throat being 1¼ inches in diameter. All bodies are the same, for high or low pressure service.

For convenience, the regulators are designated as the high pressure type of units. The only differentiation for low pressure construction is where semi-low or low-pressure enclosed dead weight diaphragm head exists and where bearing pins are installed so as to give a 3.4 to 1 lever pressure, as compared with pin installations in the center hole to produce a 1 to 1 power ratio for the high pressure units. Change from high to low pressure service is easily effected.



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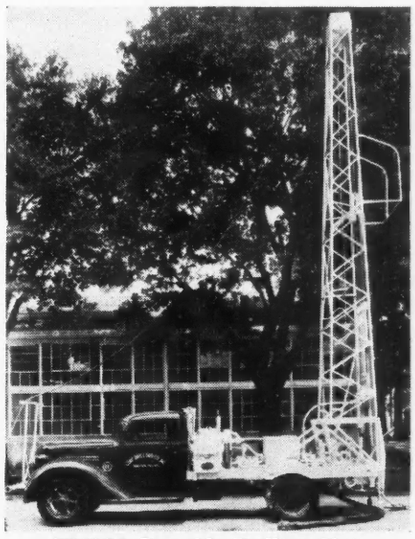
W.K.M. Company

W. K. M. Company, Houston, Texas, has developed a portable drilling outfit that was designed to avoid the delays and sometimes prohibitive costs of moving in and setting up a steam drilling rig. The new outfit is an ingenious, efficient and portable motorized drilling rig that consists of a standard 1½-2 ton Model 212 Diamond T Truck chassis and cab, with a derrick, rotary table, draw works and mud pump.



W.K.M. Portable Drilling Unit

The rigs are capable of drilling a hole 1,000 feet deep, and through the use of auxiliary equipment, winches and leverages, are able to traverse almost inaccessible terrain. Some of the trucks are equipped with separate engines, although for the most part, power for operation of drill, and mud pump is taken from the truck's own power plant using a split-shaft power take-off to provide drive for both drill and mud pump.

The unit is suitable for all drilling activities, and has an extremely wide range of applications. Predominant, of course, is its use in exploratory drillings to depths of from 80 to 100 feet, a type of work essential to petroleum production, water search, and preliminary studies preparatory to beginning construction of bridges and building foundations.

In exploration of suspected oil-bearing territory, the drill truck is followed closely by the seismograph crew, which does the "shooting," the results of which, recorded upon the delicate seismographic instruments, indicate whether or not oil is likely to be found and, if so, at what depth.

In operation, the unit is driven to the chosen site and parked. Using the truck's engine for power, the mast or derrick is raised, the drill stem quickly adjusted and the engine's power shifted to turn the drill, while at the same time the mud pump circulates the fluid to wash the cuttings from the hole as drilling progresses. For coring work a larger unit and, of course, a Diamond T Truck of longer frame are required, as these core holes are drilled to depths of from 100 feet down to 2,000 feet.

GASOLINE ENGINE
Hercules Motors Corporation

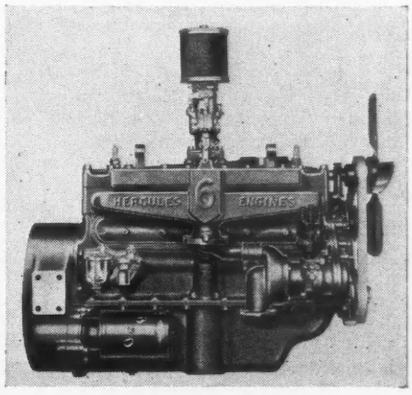
Hercules Motors Corporation, Canton, Ohio, in announcing the "QX" series engines and power units, has added two models to its present line of modern and advanced heavy duty four and six-cylinder engines. The "QX" series meets the requirements of the trade for a small six-cylinder heavy duty engine. The two new models have the following specifications:

Model "QXA"—Bore 3⅛, stroke 4⅛, displacement 190.

Model "QXB"—Bore 3¼, stroke 4⅛, displacement 205.

These models are identical in general design and appearance, and the majority of the parts are interchangeable, the only difference being in the bores and the parts affected thereby. The maximum torque of the "QXA" is 130 foot pounds at 1000 revolutions per minute, and of the "QXB" is 135 foot pounds at 1000 revolutions per minute. Both models peak at 3000 revolutions per minute, at which speed the "QXA" develops 55.5 horsepower and the "QXB" develops 60 horsepower.

To meet present day operating conditions calling for a sustained high speed, special consideration has been given to the valve cooling, and water completely surrounds the valve seats. Full packless engine lubricated water



Hercules Model "QXB"

pumps are supplied on these engines, making it unnecessary for the operator to periodically adjust glands or add grease.

The engines are equipped with a No. 5 S.A.E. bell-housing, and fly-wheels can be furnished for any standard make of clutch which can be installed in a No. 5 housing. Down draft and up draft manifolds are both available.

Lubrication is of the full force feed type to all main and connecting rod bearings. The lubricating oil pump is located beneath the center main bearing and is driven from spiral gears on the cam shaft. The material from which the oil pump, shafts and gears are machined has been selected to insure long life. Oil pressure is readily adjusted to suit operation requirements.

SWITCHGEAR UNITS

Westinghouse Electric and Manufacturing Company

Westinghouse Electric & Manufacturing Company, Schenectady, New York, has announced a standard line of factory-built metal enclosed switchgear for shipment as a complete assembly. Suitable for small industrial installations or auxiliary circuits in steam power stations, the units are factory assembled and tested so that cross connections do not have to be made in the field.

This metal enclosed switchgear consists of cubicles in which are mounted circuit breakers, buses, disconnecting switches, instrument transformers and similar auxiliaries. On the front panels which are hinged are mounted desirable relay and meter equipment. The structure shown in the illustration consists of five units, four of which have solenoid operated breakers with the mechanism located behind the front panel. The fifth unit has a hand-operated breaker.

The disconnecting switches are located in the upper compartment and are hookstick operated. The wire glass permits inspection of their position without opening the doors. The latches on the door have eyes to permit opening the door by means of the same hookstick which operates the disconnecting switches. Provisions for extension of the structure is made with a cover over the end of the bus as shown in the illustration.

SPEED REDUCERS

Foote Bros. Gear and Machine Corporation

Foote Brothers Gear & Machine Corporation, Chicago, has recently added to its standard lines a very complete line of fractional horsepower motorized speed reducers known as IXL fractional horsepower powered gears. These units range in size from 1/50 horsepower up to ¾ horsepower and ratios from 2 to 1 up to 8000 to 1. The various types include single and double reduction worm gear, single reduction helical gear, and combination worm gear and planetary gears at higher ratios.

The units are sturdily built, and of a pleasing appearance.

Bulletin No. 750, on the IXL fractional horsepower powered gears, with selection and price tables as well as dimensions, will be furnished on request.

This Week with the Industry's EQUIPMENT SUPPLIERS

New Fabricated Steel Company Organized

Allied Steel Products Corporation has been organized in Tulsa by E. C. Hinkefent and associates to fabricate structural steel and manufacture steel buildings. Hinkefent formerly was associated with Braden Steel Corporation, and with him in the new company are John E. Kirkpatrick and Duke B. Merrill. Kirkpatrick is secretary-treasurer and formerly resided in Oklahoma City, and Merrill is vice president and was formerly with Braden Steel.

Allied Steel Products has acquired the tank car repair shop of Skelly Oil Company in Tulsa, and new equipment has been installed to facilitate the fabrication of structural steel and the manufacture of steel buildings. The company also is equipped to erect and dismantle buildings of this type as well as move and repair them.

Allis-Chalmers Takes Over a Subsidiary

Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, on January 1 started operating its heretofore subsidiary company, Condit Electrical Manufacturing Corporation, Boston, Massachusetts, as a company unit. The plant is now known as Allis-Chalmers Manufacturing Company, Condit Works. The plant will continue to specialize in the manufacture of switchgear products as a division of the electrical department under R. S. Fleshiem, manager.

The personnel with headquarters at Boston will be as follows: George A. Burnham, assistant manager of the electrical department in charge of sales and engineering of the switchgear division; W. S. Edsall, manager of sales, switchgear division; and H. V. Nye, engineer in charge of the switchgear division, with headquarters at Milwaukee.

Fred E. Cooper Back From South American Trip

Fred E. Cooper, of Fred E. Cooper Company, returned to Tulsa last week after having flown nearly 25,000 miles in about 19 days. On a business trip through South America, he was "up in the air" most of the time, but managed to see a great many points of interest before returning to the United States.

"The development of agriculture and stock especially impressed me," he said. "Their wheat fields are the most beautiful I have ever seen, and their sheep and cattle are well developed. The sheep appear to be nearly twice the size of those we have in this country."

Cooper spoke highly of the manner in which oil companies operating in the country take care of their employes and properties. "Many camps," he said, "are cut off entirely from any contact with the outside world, other than by boat or airplane, but they are modern in every detail. The spread of disease is checked by a strict enforcement of cleanliness among all classes of workers. Each one is obliged to take a shower every day, and the working hours are so arranged that the afternoons are open for the playing of games, including baseball, tennis, soccer and golf. And three times a week, they play polo. Most of the horses are brought to the camps from Chile, and the plan for owning the horses is so worked out that an employe can have three horses at a complete cost of $10 per month, including stable boy and all, less the cost of the horse."

Only one thing happened to mar the perfection of the trip according to Cooper. When he arrived in Oklahoma City, the weather was so bad that the plane was grounded, and he was forced to cover the last 125 miles by rail.

Worthington Absorbs Associate Organization

Effective January 1, Worthington Company, Inc., with offices in Seattle, San Francisco, Los Angeles and El Paso, was absorbed by its parent organization, Worthington Pump & Machinery Corporation, of Harrison, New Jersey.

This announcement follows that of December 28, covering the absorption by Worthington of its subsidiary, Carbondale Machine Corporation, builders of refrigeration, ice manufacturing and air conditioning equipment.

Bethlehem Steel Corporation Enters Oil Well Supply Field

Bethlehem Steel Corporation, 25 Broadway, New York City, through its president, E. G. Grace, has announced acquisition of Taubman Supply Corporation effective January 1, 1937. With every major steel company having a supply company outlet through its own subsidiary companies, Bethlehem Steel Corporation, second largest steel manufacturer in the world, follows other companies in setting up its own supply company, which will be called Bethlehem Supply Corporation, with headquarters in the National Bank of Tulsa Building, Tulsa. Herman P. Taubman will continue to direct activities of Bethlehem Supply Corporation as executive vice-president and general manager, with all officers of the former Taubman Supply Corporation remaining in their respective positions.

It is the plan of Taubman to gradually expand operations in the supply field to include all active fields. To the present line of pipe and equipment, the expansion program calls for the addition of a large number of major items used in drilling and production. Announcements concerning these additions of new lines will be made from time to time.

The company, in addition to its headquarters in Tulsa, has a district office and main distributing plant at Houston, Texas, a district office in the Magnolia Building, Dallas, Texas, and a district office in the Union National Bank Building at Wichita, Kansas. All these

district offices will be continued under the same management with enlarged space and personnel.

The corporation's stores are located at Corpus Christi serving Southwest Texas; Houston for the Gulf Coast; Monahans for West Texas; Borger for the Panhandle area and Willow Springs for the East Texas area. In Oklahoma, stores are located in Tulsa, Oklahoma City, Seminole and Ada; in Kansas at McPherson, Chase and Russell. In Louisiana a store is now being built at Rodessa.

In addition to the supply stores, machine shops with latest Landis pipe threading machines equipped for handling API as well as standard threads are located at Houston, Willow Springs and Borger, Texas; Tulsa, Oklahoma City and Seminole, Oklahoma and McPherson, Kansas. Additional Branches and Machine Shops will be added as new fields of importance are opened up.

American Chain Changes Name

American Chain & Cable Company, Inc. is the new name of an old company, known previously as American Chain Company, Inc. Long recognized as a large manufacturer of chains for all purposes, American Chain Company has since 1924 become a leader also in the production of wire rope or cable for all purposes. It was this fact which caused the directors of the corporation to enlarge the name to American Chain & Cable Company, Inc.

In addition to chain and wire rope, many other essential products are manufactured by the following divisions and associates of American Chain & Cable Company, Inc.: American Chain; Andrew C. Campbell; Manley Manufacturing; Page Steel and Wire; Wright Manufacturing; American Cable; Ford Chain Block; Hazard Wire Rope; Highland Iron & Steel; Owen Silent Spring; Reading-Pratt & Cady and Reading Steel Casting.

American Chain Company first became a factor in the wire rope or cable industry through the acquisition of American Cable Company and the invention of the preforming principle in wire rope construction in 1923. Several years later American Chain Company acquired by purchase one of the first wire rope manufacturing concerns in America, namely: Hazard Wire Rope Company, established in 1846.

The directors recently elected W. B. Lashar chairman of the board; W. T. Morris, president; Wilmot F. Wheeler, executive vice president and treasurer; A. P. Van Schaick, vice president in charge of sales; C. G. Williams vice president in charge of production; W. M. Wheeler, secretary; Frederick C. Geier, assistant secretary; and Stanley Mann, comptroller.

American Chain's familiar trade mark, known as the "ACCO Giant", will be retained as a common symbol of quality in the advertising and sales promotion of American Chain & Cable Company and its several divisions.

The general executive offices will remain at Bridgeport, Conn., and 230 Park Avenue, New York City. District sales offices are located at Boston, New York, Philadelphia, Detroit, Chicago, San Francisco, Pittsburgh, Atlanta, Tulsa, Houston, Denver, Los Angeles and Ft. Worth.

Manufacturing plants are located at Bridgeport and Hartford, Conn.; York, Reading, Monessen, Braddock, and Wilkes-Barre, Pa.; Adrian, Mich.; and Terre Haute, Ind. The Canadian affiliate, Dominion Chain Company, Limited, is located at Niagara Falls, Ont. The British subsidiaries, The Parsons Chain Company, Limited, and British Wire Products, Limited, have offices in London, England.

CHARLIE GLASSCOCK

Thornhill-Craver Company, Houston, Texas, has Charlie Glasscock representing the company in North Louisiana, East Texas and Arkansas area, emphasizing at this time the Rodessa field coverage. He makes headquarters in Shreveport. Glasscock came with this organization following experience in this same territory in the supply business.

"Jim" Robinson Made Vice President of Crane Limited

With the beginning of the new year, J. I. Robinson assumed the office of vice president of Crane Limited, Canada. He succeeded J. Austin Murphy, who has retired from active service after 51 years with the company.

"Jim," as Robinson is familiarly known, joined Crane Company in 1907 in the San Francisco branch. In 1919, when the company started its Canadian expansion, he was transferred to Montreal where he worked his way up to the position of director and general sales manager. From this position he now steps up to the office of vice president, with complete supervision over Crane Limited and its subsidiaries.

Lincoln Electric Company Opens Chattanooga Office

The Lincoln Electric Company, Cleveland, Ohio, announces that Robert Daniels has been placed in charge of the Chattanooga, Tennessee office of the Company located at 1015 Hanover Street.

Daniels has been associated with the company in sales work since April 1934. He is thoroughly schooled in the practical aspects of arc welding, having worked four years as a welder for Chicago Bridge and Iron Works. This practical background coupled with Daniels' engineering education—he holds a Bachelor of Science degree in Mechanical Engineering — fits him well for his duties.

Foote Bros. Gear Enlarges Plant

A new addition of the plant of Foote Bros. Gear and Machine Corporation at 5301 Western Blvd., Chicago, has been completed. An additional 5300 square feet of floor space to the assembling and testing department is provided. The additional plant facilities were necessary for efficient handling of the company's business, according to F. A. Emmons, vice president and general manager.

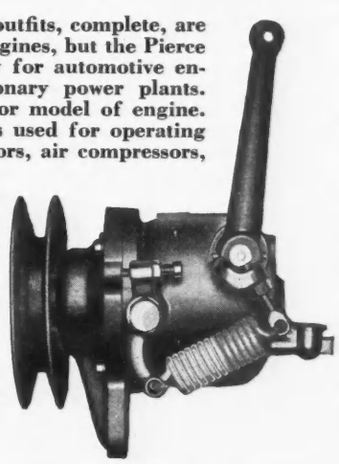
Pierce

Universal Governors

***Meet Every Requirement*—Pierce Governor outfits, complete, are available for nearly all standard industrial engines, but the Pierce Universal Governor was developed especially for automotive engines that have been converted into stationary power plants. These governors can be used on any make or model of engine. They are suitable for governing any engines used for operating pumps, welding generators, lighting generators, air compressors, hoists, etc.**

CLOSE REGULATION—Pierce Universal Governors are belt driven and either flat or V-belts may be used. The governors are of the centrifugal (or flyball) type and respond instantly to each change in engine load, maintaining a uniform speed regardless of load variation.

Because of their efficiency, Pierce Governors have been regular equipment on a majority of the standard industrial engines and on various types of industrial machines. No better governors are obtainable. Write for literature and prices.



The Pierce Governor Co.

600 Ohio Avenue, Anderson, Ind.

CATALOGS . . . BULLETINS

Helpful Publications Which Manufacturers Will Gladly Send Free for the Asking

Rubber Specialties

United States Rubber Company, New York City, has ready for distribution an attractive catalog describing its rubber specialties for oil well rotary drilling. Hose, packings and V-belts are featured. The catalog is well illustrated and construction features of the equipment are stressed.

Handbook

John Wiley & Sons, New York City, recently issued the eleventh revised edition of "Mechanical Engineers' Handbook," by Robert T. Kent. The latest edition contains 1254 pages and a revolutionary change has been made in the set-up of the book. Its content now is divided into two sections, one dealing with the entire field of power and its applications, and another covering in detail the present-day methods in design and shop practice. The price of the new edition is $5.00.

Flow Meters

The Brown Instrument Company, Philadelphia, Pa., has just published a handbook on flow meter engineering that covers all phases of construction engineering features. The subjects particularly stressed are general flow meter engineering, orifice design, steam flow measurement, water flow measurement, liquid flow measurement, and air and gas flow measurement. The price of the book is $2.00.

Speed Reducers

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has ready for distribution a new publication describing its Types SH and DH speed reducers. The booklet describes both the single and double reduction units of the single helical gear type with antifriction bearings and splash lubrication for application in general industrial operations.

Thermometer Controllers

The Brown Instrument Company, Philadelphia, will be glad to mail to interested persons a copy of its most recent broadside describing the Brown thermometer controllers. The new publication is entitled, "Here's the Answer to Your Temperature Problem."

Couplings

The Champion Machine & Forging Company, Cleveland, Ohio, recently issued a folder describing the patented pipe couplings it manufactures for general pipe line use.

Gate Valves

The Kennedy Valve Manufacturing Company, Elmira, New York, recently issued a bulletin describing a new line of fully bronze-bushed standard iron-body wedge gate valves. This folder contains large sectional views of these valves, with references to 33 outstanding features of design, and describes the valves in detail. Copies of the bulletin may be obtained by addressing the company and asking for Bulletin 47.

Draw Works

The National Supply Company, Toledo, Ohio, has ready for distribution an attractive booklet describing its Ideal, "fully enclosed" type draw works for heavy duty drilling operations.

Geared Power

Oil Well Supply Company, Dallas, Texas, will be glad to mail to interested persons a copy of bulletin No. 162 (1136), describing its Imperial No. 100-SC, single crank (dual-stroke), oilbath geared power.

Mixflo Centrifugal Pump

Worthington Pump & Machinery Corporation, Harrison, New Jersey, announces availability of a new, eight-page bulletin illustrating and describing the improved Mixflo centrifugal pump in sizes from 12 to 84 inches. It delivers from 1000 to 225,000 gallons per minute at heads from 5 to 50 feet.

Drilling Clay

Baroid Sales Company, Houston, Texas, recently issued a very interesting booklet describing its "Baroco," a drilling clay.

Crown Block

Oil Well Supply Company, Dallas, Texas, has ready for distribution Bulletin No. 163, describing its No. 200 crown block.

Sicromo

The Timken Steel & Tube Company, Canton, Ohio, has prepared a new 8-page. 8½ x 11 booklet presenting additional information on the "Sicromo 2, 2, 3, and 5" steels recently announced. This booklet, which is free upon request, gives the analyses of these new steels and discusses the effect of both silicon and chromium on the oxidation resistance of steels in which they are used.

Catalog Sheet

Bradford Motor Works, Bradford, Pennsylvania, has issued a new catalog sheet, effective October 26, pertaining to its B-M-W Admore insert pump anchor.

Tank Heater

Griscom-Russell Company, New York City, recently issued an interesting bulletin describing its storage tank oil heater.

Steam Power

Oil Well Supply Company, Dallas, Texas, recently featured steam as a type of power in "Oilwell Talks," an interesting folder that will be sent free to interested persons upon request.

Governors

Gardner-Denver Company, Quincy, Illinois, recently issued an interesting booklet on its line of governors for various purposes. It will be mailed to interested persons upon request.

Belt Drives

The Dayton Rubber Manufacturing Company, Dayton, Ohio, recently issued and has ready for free distribution a combined catalog on cog belt and V-belt drives.

USE THIS COUPON
(Address manufacturer direct)

.....

.....

Please send me, without obligation, free booklet described in January 11, 1937, issue of THE OIL WEEKLY.

NAME.....

ADDRESS.....

Draw Works

The National Supply Company, Toledo, Ohio, has ready for distribution an interesting booklet describing its Ideal Draw Works, a model designed for medium depth drilling and easy portability.

Turbine Pumps

Byron Jackson Company, Berkeley, California, has ready for distribution an attractive bulletin describing its deep well turbine pumps.

Mechanical Rubber Goods

The B. F. Goodrich Company, Akron, Ohio, recently issued "A Buyer's Guide to Diamond Mechanical Rubber Goods," a 27-page illustrated catalog.

Cog Belt Drives

The Dayton Rubber Manufacturing Company, Dayton, Ohio, has issued a new catalog, No. 180, describing the cog belt drives it manufactures.

Rotary Drilling Equipment

Chiksan Oil Tool Company, Fullerton, California, recently issued two catalogs describing the rotary drilling equipment it manufactures. One catalog describes and illustrates bits, reamers and rotary hose, while a second and larger catalog gives full details on the company's suction and discharge hose and ball bearing swing joints.

Formation Tester

M. O. Johnston Oilfield Service Corporation, Los Angeles, has issued a comprehensive treatise which recommends practices and gives detailed information on uses and operation of formation testing tools, etc.

Welding Machine

The Lincoln Electric Company, Cleveland, Ohio, recently issued bulletin No. 314, describing its Model SA 150 portable welding unit, with a range from 45 to 200 amperes.

Oil Field Material

American Manganese Steel Company, Chicago, Illinois, has ready for distribution an attractive 20-page booklet describing its handling pumps, pipe line fittings and rotary dredge cutter heads.

Shovels

Link-Belt Company, Chicago, has ready for distribution an interesting booklet, "Race Horse Speed with Draft Horse Endurance," describing its line of shovels, cranes and draglines.

Rotary Attachment

National Supply Company, Toledo, recently issued bulletin No. 134 describing its rotary attachment for National Portable Drilling Machines. The bulletin gives interesting details and specifications.

Globe Valves

Hancock Valve Division, Consolidated Ashcroft Hancock Company, Bridgeport, Connecticut, has ready for a distribution an interesting bulletin that is presented in the form of a challenge. The bulletin describes the company's new valves and explains a new "double money back" policy.

Tubing Hanger

Oil Well Supply recently issued a bulletin describing its Type 36 tubing hanger, for supporting 2-, 2½- or 3-inch tubing strings.

Silent Chain Drives

Link-Belt Company, Chicago, Illinois, recently issued a new silent chain drive data book, a distinctive 96-page volume that covers the full range of drives manufactured by the company.

Metal Coating Process

Metals Coating Company of America, Philadelphia, has ready for distribution an interesting bulletin describing its sprayed molten metal coating process. A number of photographs of typical sprayed metal objects are shown.

Production Equipment

Kibele Manufacturing Company, Dallas, has just issued a new bulletin, describing all of its products in detail.

This catalog covers complete description of Kibele tubing catchers, flow head packers, pump pistons, and swabs. Prices for each product are also printed in the bulletin.

Flow Valves

Gas Lift Sales Company, Inc., Dallas, Texas, recently has published a new brochure describing in detail the Bryan flow valve and its application in automatic well flowing. It is Bulletin No. 21.

Squeaks from the Bull Wheel

Blighted

"What do you think of my family tree?"

"The tree may be a good one, all right, but it looks to me as if the crop was a failure."

Billiards

A traveling salesman, detained in a certain village overnight, was introduced in the town's hotel to a crazy little billiard table and a set of balls of a uniform, dirty-gray color.

"But how do you tell the red from the white?" he asked.

"Oh," replied the landlord, "you soon get to know them by their shape."

What's Yoors?

The old chiseler limped painfully up to the bar and leaned against it in an attitude of dejection.

"What's the matter?" asked the sympathetic friend. "Have an accident?"

"No," replied the chiseler, "I've just had a touch of the yoors."

The sympathetic guy scratched his head. "What's yoors?" he wanted to know.

"I'll take a straight whisky, thanks."

It Works!

"And how is your husband getting on with his reducing exercises, Mrs. Neuquids?"

"You'd be surprised! That battleship he had tattooed on his chest is now only a rowboat."

Home Remedy

"When I get a cold I buy a bottle of whiskey for it, and within a few hours it's gone."

"My, that's a short time to get rid of a cold."

"Rid of the cold, hell. It's the whiskey that goes."

Persuasion

Scene: A lonely spot on a dark night.

"Would the gentleman be so kind as to assist a poor man. Besides this revolver, I have nothing in this wide world!"

Smart Dog

A man was out hunting quail with him, and the dog suddenly ran into the brush. The hunter waited and in a moment a quail flew up. He shot it. In a moment, another flew up and he shot it. A short interval and up came another, which he shot. A fourth flew up as the third one fell and he shot it. But curiosity as to why the birds were flying up one at a time instead of in a bunch got the best of him. He walked over toward his dog, and, as he told me, "Do you know, that dog had run a covey down a hole and he was standing there with one foot over it letting them out one at a time so I could shoot them at my leisure."

At Last

"You've already had leave, Ferguson, to see your wife off on journey—for your mother-in-law's funeral—for your little girl's measles—your boy's christening—what is it now?"

"I'm going to get married, sir."

—L. Peterson in "The Battalion" (Texas A. & M. College).

Insurance

"You say you were once cast away on a desert island, entirely without food. How did you live?"

"Oh, I happened to have an insurance policy in my pocket and I found enough provisions on it to keep me alive till I was rescued."

Once in a Lifetime

"What induced you to strike your wife?"

"Well, your Wushipp, she 'ad 'er back to me, the frying-pan was handy, and the back door was open, so I thought I'd take me chance."

Right

The teacher was giving the youngsters a mental drill. "Now, Bobby, tell me which month has 28 days in it."

Bobby had forgotten. After a moment he had the answer, "They all have."

Fitted for Her Work

"Can you serve company?" asked the housewife when she was hiring the servant.

"Yes, mum; both ways."

"What do you mean?" asked the puzzled housewife.

"So's they will come again, or stay away."

Service

Where will I find the bus for Pumpkin Corners?

On top of you, if you don't get out of the middle of the street.

His Failure

He was a seedy-looking tramp, and he was working the "pity-the-old-sailor" dodge.

He called at a likely house along the road.

"Could you do something for a poor old sailor, mum?" he asked, as a sour-faced woman opened the door.

The woman eyed him suspiciously. "Poor old sailor?" she echoed.

"Yes, mum," replied the tramp. "Nigh on 40 years I followed the water."

"Well," replied the sour-faced female as she slammed the door in his face, "it's a pity you didn't overtake it!"

Mind Reader

"I know what's passing in your mind," said the maiden. "I know, too, why you are calling here night after night, appropriating my time to yourself and keeping other nice young men away. You want me to marry you, don't you?"

"I—I do!" gasped the astonished young man.

"I thought so. Very well, I will."

Gott
WATER CAN
Gotkool
WATER CANS
& COOLERS
GOTT Water Cans are the practical way to keep drinking water cool for long periods, protected from impurities and always handy to the job. Snug fitting large removable top, strongly built to withstand rough usage. GOTT Water Coolers have extra large covers and a handy non-leaking push button faucet. Your Supply Store has them, get one today! . . . . . .
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Made in 1½, 3, 5, and 10 gallon sizes.
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Made in 3, 5, 8, 10, and 20 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

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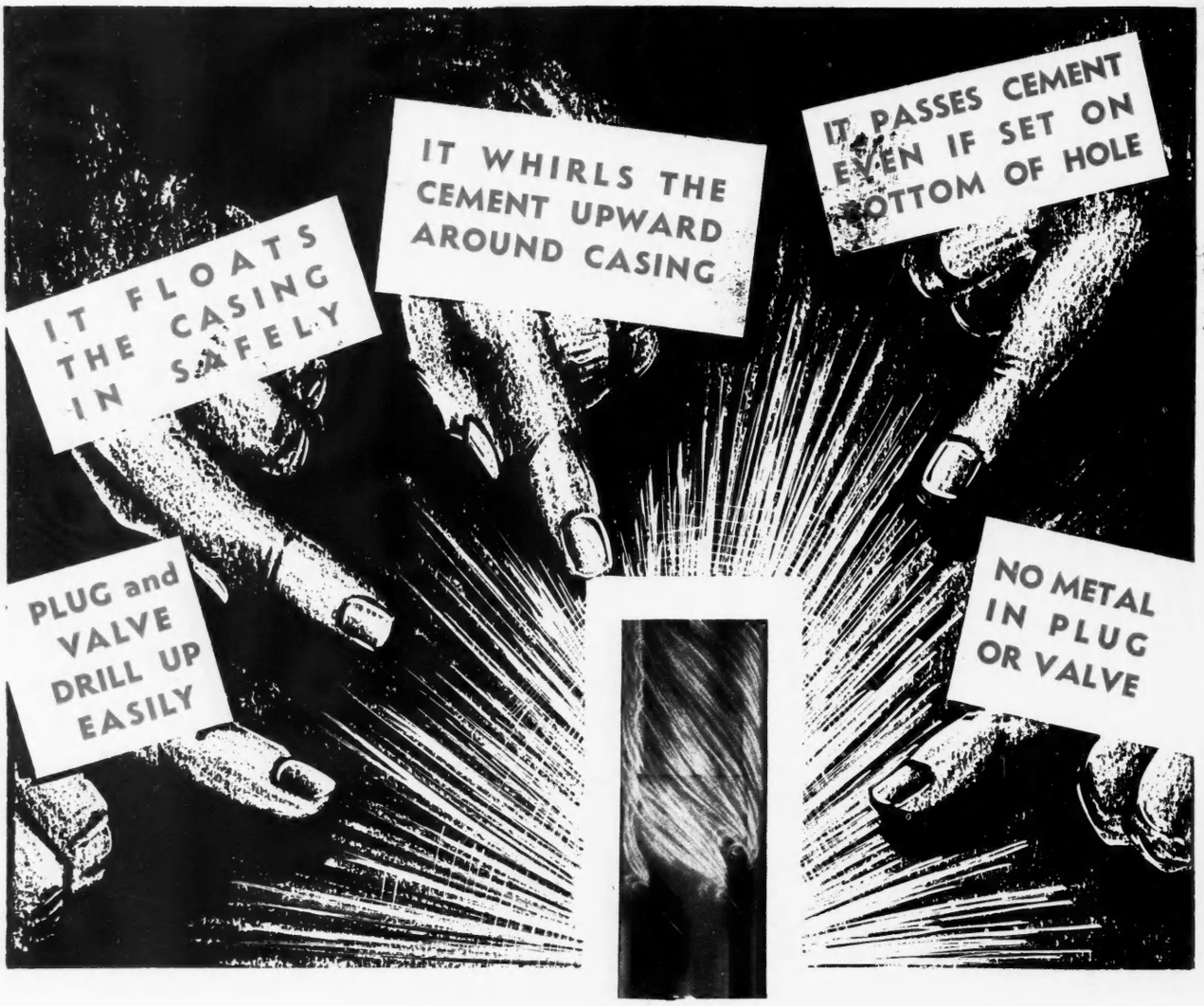
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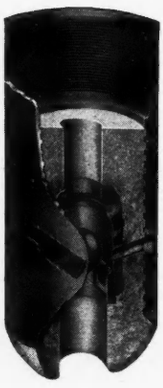
IT WHIRLS THE CEMENT UPWARD AROUND CASING
IT PASSES CEMENT EVEN IF SET ON BOTTOM OF HOLE
PLUG and VALVE DRILL UP EASILY
NO METAL IN PLUG OR VALVE

When you have spent a fortune to drill an oil well, a few extra dollars for a BAKER CEMENT WHIRLER FLOAT SHOE will safeguard your investment.

In addition to the regular bottom circulating hole, this successful shoe has a number of side ports leading out of the valve chamber below the valve seat. These outlets are "baffled" by plates set in grooves in the wall of the shoe, and direct the cement upward around the casing with a whirling motion.

Whether the bottom is full of cavings — whether the casing leans against the side wall of the hole—or even if the shoe is set on bottom—you know the cement will be distributed around the casing, with far less danger of channeling.



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1. STRENGTH

It has strength—and to spare—for setting the longest heaviest string of casing.

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It has ample circulation area for rapid passage of cement, and the buoyant Bakelite Ball instantly double-seals against rubber recessed in bakelite, to provide a leak-proof seal against either low or high pressure.

3. DRILLABILITY

It has a plug and valve assembly made of Bakelite and concrete which are easily and safely drilled out, and circulate from the hole with the rotary mud. No dangerous metal can be left to prevent coring directly below the shoe, or to deflect the bit and start an off-vertical hole.

It is described in the 1937 Composite Catalog on Page 196.

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